The Builder.

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The National Recognition v. *The National Repudiation of Art.*

T the recent dinner at Liverpool to the Lancashire, — the Lancashire and Roman, — sculptor, Mr. Warrington Wood, the toast, "The National Recognition of Art," was coupled with the name of Lord Sandon: the suggestion was not unnatural that one who was recognised as "a faithful, painstaking, and able representative of the city" might be called upon and counted on to vindicate his representative character by worthily appreciating the most comprehensive form of those artistic aspirations which his constituents at that centre of commerce had so recently and generously announced. The present to the city of the Walker Art Gallery, which had been opened by Lord Derby the day before, was, notwithstanding the official position of the donor as Mayor, not even municipal, but strictly an act of individual munificence; but truly municipal, however, was the spirit with which it was responded to; and the promise that was manifested of widely-spread sympathy with its elevating purposes was calculated naturally enough to invite a prospect,—or a dream, if it must be so,—beyond. When an individual is content,—is eager,—to merge his private ambition in the promotion of the artistic dignity of his city, it is amongst the most appropriate recognitions, and such as he may welcome most, that the city should seize the occasion to declare again as loyal a subordination of its pride to the largest national interests. Such an impulse found expression with frankness and every fitting limitation, in the words of Mr. J. A. Picton, who, among other pertinent observations, affirmed that "there are some points of view in which the recognition of art and science by Government would be desirable,—there ought to be a national recognition of art, but in a fair, true, legitimate, and proper manner."

From the reported response of Lord Sandon, it seems pretty clear that the theme which was presented to him apparently unexpectedly seemed if not quite so unpromising as the heading of the chapter, "On the Snakes of Ireland," which only allowed of the sentence, "In Ireland there are no snakes," at least on a par with that; "On the Manners and Customs of the —— Islanders," which only admitted the moderately qualified remark, "These islanders have no manners, and their customs are unspeakable." He "put aside Government recognition of art because it had evidently dropped," and he "looked in vain for any great result produced by State patronage either in the present time or in the past." His lordship certainly piled one difficulty upon another until it might seem, at last, that we had better not enter the maze of perplexities at all, when no better result is before our most sanguine exertions than the alternative of choice between a pitfall or a cul-de-sac. The remark that "there is at present no minister who represents science and art in the country," provoked an exclamation from "a voice,"—that anonymous voice which will from time to time in all meetings turn a wrong switch in front of a speech in full career, and endanger an upset or a divergence as fatal. "There ought to be," said the voice. The challenge was taken up with no lack of confidence and self-possession, but the reasons why there ought not to be were collected rather from the point of view of a Government office than of those for whose behoof Government offices and officials are constituted at all. Such a minister, as it was set forth rather touchingly, would have a hard time of it; let the condition of a minister be only imagined, who, "with funds to dispose of," would be in danger of being torn to pieces by Schools of Art, classes of art, divisions of science many and multifarious, and all the towns of the country in full cry after him. This is bad enough, but worse is behind; and even the troubles that beset the administrators of imperial politics seemed to be merely ordinary vexations, as compared with what a Minister would be exposed to between the harassing complaints of scientific intellect on one side and the shafts of embittered criticism and the onset of Fine-Art, riding its very highest horse, on the other. And of a truth we may willingly admit that a Minister of Science and Art would be likely enough to have his tranquillity and repose disturbed by something more than the occasional irritation of a crumpled rose-leaf, would be roused pertinaciously enough by applicants "wanting to know" what, even with the best will, he might find a difficulty of telling; and would have his ingenuity taxed to the utmost to find out how handsomely "not to do" even what ought not to be done; supposing in charity that he was unofficial enough to adopt such a limitation to masterly inactivity. Devote himself as he might to deliberately emulate that accomplished linguist, who, from genuine inability to converse, was renowned for being "silent in five-and-twenty languages," he would find himself goaded perforce into replies, into correspondence, and worst, and most hated and dreaded of all, into decisions. Invulnerable if he could only keep unmoved, the very first change of attitude would open some chink in his armour, and of the hundred pointed and barbed imputations that would leap out at once with better aim or worse, but all with like intent, it were strange indeed if some did not draw blood and fret intolerably, though never deeply penetrating a tolerably thick official skin, to say nothing of reaching a vital part.

But, to meet a public demand, an objection which resolves itself into difficulties of this character is, must it be said, just a little trifling: it is to trifle with the public, whether the demand which so many consider it worth while to support is regarded as reasonable or not. A better reply is due, in any case, than that what is required would give, whoever were charged with the duties, some very unpleasant hours. Private duties are not always the pleasantest parts of our daily occupations; and public functions, ardently as they are aspired to by the best men of the time, are not anticipated by the best men as the less desirable because they understand it to be "a serious matter if they are to be charged with so grave and responsible a thing." In short, there are, and will be, those who do not hesitate to recognise in such arguments another sign of that too eager abnegation of administrative duty,—

> "A thought which quartered hath but one part wisdom,
> And ever three parts"——idleness.

—if, indeed, by an application of the modern chemical theory of substitution, we are not to replace the single aliquot of wisdom by an equivalent of timorousness. It is not in the matter of the arts alone,—and pity it is if now in the arts also,—that the social tone is becoming relaxed, because it seems easier, so long as Government functions will *go on*, to let them go on without further interference, under a previous but declining impulse,—time enough when that is exhausted to consider whether it were not as well that their vigour should be sustained and reinforced by being systematically *carried on*. And so, when business comes to that stage at which the first point, "Can't we leave it alone?" must be negatived, the nearest approach to a healthy "categorical imperative" that we are left to hope for, is at best a permissive solution.

But the fact is, that to reduce the subject to its most limited form, a nation cannot escape, though with the best will, from the necessity of sometimes dealing with art as a nation, and so far being committed, with better results or worse, to a national recognition of art,—a recognition which must needs have immediate relation to the national Government, whether to a "Ministry of the day," or something less ephemeral in duration or purposes, or not. For example, there is no form of what should be a work of art that comes more constantly under the eyes of the entire population than the coinage of the realm. The adoption of types for our money of all forms is certainly a matter of national interest, and can only be controlled by an authority delegated by the national Government. Whether our present current coin is better or worse in an artistic point of view than it might be,—whether a single specimen of a single English coin, since the days of Pistrucci, has such merit that it is worthy to be sought for simply as a work of admirable art, does not matter to our argument. That our coins might and should have such merit is to be accepted unsaid,—that it is not well to leave them to the chances of a happy accident is equally clear; and this throws us upon the consideration of how such a case of national recognition of art

which may be forced upon any Ministry of any day, can be most satisfactorily provided for. That "Governments of the day" are apt to be but "humdrum" may be conceded to those members of them, or those officials who think to serve them, by assuring us of a fact so unartistic and so unpoetical. With somewhat more reluctance we listen to the avowed probability or something more that a minister of science and art will be a bigoted partisan, and "throw the whole scale of his influence on one side,"—the Mediæval or the Classical,—will have eyes and ears exclusively for a clique, or at most a school,—the rising school, or the obsolete and out of date. All this only leads us to an illusory indication of why and how not to do it,—not to do what we all know must of necessity be done better or worse, and has been done before and ought to be done again very well indeed. It is a necessity that certain national works—coinage is only one—should be done under and by national sanction,—done in a manner honourable to the nation as confronting all other nations, as well as appealing to the applause and sympathy of its own sections and parties collectively. The nation recognises, and should be proud to recognise, merit in art, in science, in literature, by some public signs, whether knighthood, baronetcy, pension, or a trickle of suffixed initials are the best contrivances for the purpose or not. It is one of the rising difficulties of the time that such distributions, however often conscientiously guided no doubt, do get astray sometimes, and perhaps too often. So it is that a lack of coincidence may unhappily ensue between the lists which are selected for honour by the nation as a Government, or by its corporate delegates, and by the nation as moved by independent sympathies. That the truly national recognition of art especially is becoming more and more at odds with the official, reduces the dignity of the unfairly-preferred even more seriously than it discourages the excluded; the more need that the difficulty should be dealt with. Of all national recognitions of merit that of a statue in a public place seems most characteristic, and the assignment, it would seem, should, therefore, in most instances, be a national act, and in most important cases it will and must be so. If the desert so honoured is scientific or artistic, and whether the site given be the interior or exterior of a public building, the nation and authorising Government are doubly committed to the recognition contended for; or whether, as more frequently has been the case, the honour has been earned by services in war or in the senate,—the responsibility is thrown upon the Government of making such a selection of the statue to be erected that the world shall be spared one more irritating eyesore. It were well that even in the case of statues to be erected in public places by private subscriptions more or less comprehensive, the nation should be able to rely upon a power in some quarter to put a veto at least on an abuse of the accorded privilege, or even to redress a grievance, once too indulgently admitted.

So, again, our great national structures must remain without the least adornment by painting; by that art which has for its endowment the power of adding interest in the most popular way to the record of history,—if Governments are to be condemned to be for ever not only form but colour-blind. And what of architecture? If Governments have, indeed, hitherto so often failed in the convenience, suitability, or general aspect of the buildings which they have selected and sanctioned, we shall not escape from the dilemma we are involved in of necessity, by declaring that henceforth they shall eschew fine art, and repudiate artists utterly. Governments must be housed,—cannot but be housed conspicuously,—and if the buildings which are in such national occupation are not beautiful or dignified, they will of necessity be vulgar and ugly. That common-place utility is both father and mother of architectural beauty is about as valuable a maxim as that strict adherence to truth is eloquence, poetry, politeness, and even grammar.

Lord Sandon has "yet to learn that the support of the State had ever produced artistic genius or success." But so far as this avowal does not involve an equivocal intimation, it may be said that no such lesson is proposed by any one in his senses as requisite or possible to be learnt. "Fine art," said Sir Edwin Landseer, to a Parliamentary committee, "cannot be taught," and genius cannot be produced by State support, or what has been tried more lavishly may be, by State starvation. But if the lesson that is still to be learnt is,—"that the support of the State has ever been the means, as it was the indispensable means, of enabling artistic genius to produce success," the sooner and the more assiduously the tiro betakes himself to his historical studies the better; and then it will probably be time enough for him to present himself again for examination on the subject, whether as a toast or a thesis, of the national recognition of art.

CURRENT CONVERSATION.

THE LOCAL GOVERNMENT BOARD and its president, Mr. Sclater-Booth, in their recent tentative achievements, which may yet infuse harmony and order into the conflicting regulations of building laws, of metropolitan and provincial management, and of sanitary rules throughout the country, deserve recognition. If we have contented ourselves with simply mentioning the difficult and useful task in which, with every promise of ultimate success, they have been for some time engaged, it is partly because the subject is one eminently associated with the professional and private occupations of a large number of our readers whose opinions thereon, far from requiring to be "formed," as the foolish phrase goes, must be ascertained, sifted, and compared with our own before public writers, hoping to speak with authority, can express satisfaction or offer objection as to the heads of an important administrative code. At the same time, our own opinions are so well known, from the almost hebdomadal criticism of metropolitan and provincial building as it is at present carried out, and our constant reference to the many defects and omissions in the laws now in force, that the comments we should make upon suggested modifications in the details of local government technicalities are sure to be divined by attentive readers or regular correspondents. The "Model Bye-laws," only lately issued to the public, have been for some months,—in a fragmentary state for much more than a year,—in the hands of people whose advice has been sought and obtained by the compilers. Though completed and published, they are, however, in their relation to various urban sanitary forces, only memoranda,—not bye-laws, but suggestions for bye-laws; and it depends upon the good sense and good will of Englishmen whether eventually there shall continue to be a jumble of contradictory statutes by which in the country local government can do on one side of a river precisely the contrary to what is done on the other side, and by which in a town one district may successfully neutralise the reforms of another; or whether the official regulations necessary for the proper management of towns, the control of building construction, and for public health, and enforced by local powers far and near, shall assist or impede the possible purification of town and country. Long before the passing of the Public Health Act in 1875 a vast deal of information had been, often voluntarily, collected; a great deal of it, interspersed with good advice, was diffused over the country. Since then progress has been made; and, more, it is apparent. In a paper* read at Oxford by Dr. Acland, graceful acknowledgment was offered to the "highly instructed" periodical literature by which sound knowledge on the subject was becoming common property possessed by persons in even remote districts. Dr. Acland's words are well worth reading again; his references to Mr. Edwin Chadwick and to Mr. Rawlinson were and are thoroughly deserved. "Above all," he said, "the good sense of the country is embarked in the work. Every place has its Sanitary Authority, composed of elected residents,—would they were always selected also,—and every place has but one Authority." The importance and utility of a free technical discussion in the matter of "model bye-laws" and in the leading items of what must lead to the amendment of the actual Building Act, has been acknowledged by Mr. Sclater-Booth and others on the part of the Government. We so often hear, even from professional men, doubts concerning the propriety of publicly discussing measures in embryo, fears lest the newspapers should get hold of some of the crudest of crude suggestions, that the value of discussion may be usefully re-urged. Neither the Government nor the people direct public opinion or make public laws. It is discussion,—action and reaction between the two,—which brings about stable progress.

THE PUBLIC HEALTH ACT permits the local Authority to make bye-laws with respect to certain matters connected with local government: thus, a bye-law made in Manchester and a bye-law made in Liverpool, both referring to the same subject, may be needlessly dissimilar, and even contradictory. To mitigate this obvious evil the Local Government Board have compiled a series of eight model forms for the use and guidance of every Urban Sanitary Authority in the preparation of local bye-laws. The first refers to bye-laws which are intended for operation where the Local Authority do not themselves undertake the cleansing of footways, the removal of house refuse, and the cleansing of closets or cesspools,—where such duties are imposed upon the individual occupiers of premises. The second refers to bye-laws for the prevention of nuisances arising from filth of all kinds. The third refers to bye-laws for the well ordering of common lodging-houses. The fourth, of more immediate importance to architects and builders, treats of bye-laws relating to new streets and buildings. The fifth consists of bye-laws relating to markets; the sixth of those relating to slaughter-houses; the seventh to hackney carriages; and the eighth is a comprehensive model of rules for public bathing-places both on the seashore and at inland establishments. This series may be considered invaluable as a guide to local Boards, seeing that no bye-laws the latter choose to make can take effect until they have been submitted to and confirmed by the Local Government Board; and the facilities offered by the central administration are of a most practical character. The whole of the clauses comprised in the model series are now printed on foolscap paper, with an ample margin for quotations, and placed at the disposal of any and every local Authority. Where alterations are required to suit special circumstances in a particular district the necessary variations can be shown in manuscript on the margin of the draft and submitted to Imperial authority. After the final revision of the draft and the concurrent consent of the Board and the local Authority, after due consideration of any objections made by persons locally interested, the bye-laws of a district will then be officially confirmed at Whitehall. Up to the present hour the art of driving through an Act of Parliament, or a bye-law deduced from it, has by no means been confined to any particular part of town or country. Both legal and technical flaws have invited insidious and even open assault. The fact that dwelling-houses are erected all over the country, in the suburbs of the metropolis, and in London itself, which the common sense of passers by, not architects, unhesitatingly condemns,—and that such houses are occupied to the detriment of health and comfort,—has been too often admitted to deny the need of some central guiding control like that which the Local Government Board have shown themselves not indisposed to exercise.

AT THE LAST BIENNIAL CONFERENCE of architects, the necessity for some combined action in the matter of local building regulations was made apparent. Mr. J. Honeyman, of Glasgow, prepared a valuable code of amendments on the present Building Act. Mr. J. Clarke, of Liverpool, read a paper on the same subject, regarded from a different standpoint; and he described the anomalous condition of local rule in Liverpool. There the prescribed thickness of internal walls is made to depend upon the length and height of the front wall of a building: the party-wall of two houses may be 9 in. thick if the front wall does not exceed 39 ft. in width of frontage and 36 ft. in height. This absurd rule, of course, permits all sorts of inconsistencies; indeed, a party-wall is not officially defined in Liverpool, nor is there any compunction to carry one above the slates of a roof. If good and strong buildings have accumulated there it is due mainly to the determination of practitioners and the good sense of their clients. In Dublin it appears from the remarks of Mr. Drew that not only is the Irish capital innocent of any Building Act, but no rules respecting party-walls are in force there. Often also where a hierarchy of inspection is supposed to be at work, flagrant contempt of the most elementary principles of precaution occurs. In the important town of Greenock, to follow Mr. Honeyman's description, there is a "master of works," and there are bye-laws in full operation; but in

* See *Builder*, vol. xxxiv., p. 210.

that town last year a building was completed which set at defiance every sound principle of arrangement and construction. Eleven shops occupied the ground story and the superstructure consisted of three floors of dwellings, in all about thirty separate houses. The three floors are approached by a single staircase at one end of the building, which is 145 ft. long. The staircase is constructed of lath and standard partitions supporting stone steps, while nearly all the partitions dividing the houses are of lath and plaster. The floors are of naked wood, and the external galleries or balconies, by which the separate dwellings or flats are reached, are formed by allowing the joists of each floor to pass through the back wall and project to the required width. The imperfect nature of local bye-laws relating to building has been pointed out by various architectural societies in the provinces, and the objections to the present system have been enumerated in several reports. An important memorandum was forwarded to the Council of the Royal Institute of British Architects by the Manchester Society; and soon afterwards a comprehensive statement of professional opinion was forwarded by the Institute to Mr. Solater-Booth.

THE MANCHESTER SOCIETY OF ARCHITECTS prepared a synopsis of Local Board bye-laws showing the variations and discrepancies between Manchester and Salford, and between places in the immediate neighbourhood. Thus in the matter of wood at chimney flues, Manchester says that timbers must not be laid within 4½ in., and Salford 5 in., of the inside of a flue. Crumpsall, Stretford, Barton, and Heaton-Norris say not within 6 in.; while Openshaw, Prestwich, Bradford, Gorton, and Newton-Heath say not within 9 in., "unless rendered." For the sizes of joists, Openshaw prescribes, over a span of from 12 ft. to 15 ft., joists of 6 in. by 2½ in., spaced at a distance of 16 in. from centre to centre. Stretford, Barton, Newton-Heath, and Salford, for a span not exceeding 14 ft. prescribe joists of 7 in. by 3 in.; Heaton-Norris, for a similar span, 9 in. by 3 in.; Bradford, 6 in. by 2½ in.; Prestwich, Crumpsall, Gorton, and Manchester prescribe no scantlings of joists at all. As for beams, the variations are more than tiresome: Openshaw, Prestwich, Crumpsall, Bradford, Gorton, and Manchester preserve a sublime indifference; Stretford and Salford, on the contrary, declare that for a span of 15 ft. a beam shall be 15 in. by 12 in. Barton, however, says it shall be 14 in. by 9 in.; Heaton-Norris, 12 in. by 9 in.; Newton-Heath, 14 in. by 11 in., and all for the same span of 15 ft. The height of rooms in the neighbourhood of Manchester is also subject to some divergence of opinion. The Corporation of that city require them to be 9 ft. high, but Salford prefers 8 ft.; if in a roof Manchester asks for 7 ft. 6 in., Salford is satisfied with 7 ft. Openshaw, Stretford, Barton, Heaton-Norris, and Newton-Heath agree with Manchester; Prestwich and Crumpsall agree with Salford, but Bradford and Gorton are diplomatic enough to split the difference, and they say 8 ft. 6 in. will suffice. Petty differences similar to these occurring in Manchester and its neighbourhood are to be encountered all over the country; and often while such important things as the contact of wood with chimney flues, and the proper thickness or composition of horizontal divisions in dwelling-houses are disregarded, while party-walls are ignored altogether, the most ridiculous restrictions abound and flourish for the mere gratification of official conceit or parochial whim.

A BUILDING ACT IN UTOPIA* is the title of a half-satirical reference we made, more than three years ago, to some of the inconsistencies of the present Building Act, the least defective in technical details of the many similar Acts which the wisdom of Parliament has devised. We pretended to see a city where the rain fell to clean, not soil, the streets; where the smoke of chimneys, instead of polluting the houses of the rich, helped to comfort those of the poor; where there was a government to rule, not merely a local board to misgovern. We described the stairs which *used to exist* even in the expensive quarters of the metropolis,—stairs of specially inflammable material, about twice the width of a builder's ladder; we implied that as incendiary fires occurred every night in London, and as these stairs are often the first things to burn, Londoners depended for safety upon the external "fire-escape" which was to be seen every night in the streets. We explained that such fire-escapes are useless for the purpose of assisting thousands of persons who are located in the upper floors of large hotels and private houses. We declared that the Building Act, having been framed in the palmy days of jocular legislation, it had been enacted that every habitable room should be 7 ft. high from floor to ceiling,—for a minimum dimension allowed by law is, in many cases, made the maximum,—the joke being that no room of such a height could possibly be habitable. We laughed at a system which permitted rain-water pipes to discharge the drainage of a roof upon the street-pavement, as in the Strand and other highways, and even on part of the Crown land in the metropolis. We spoke of the unwritten rule by which in England one half of the community is occupied,—often in an honorary capacity,—in making life unpleasant to the other half. We maintained that the great mass of the metropolitan population whose incomes did not exceed 300*l.* per annum, and who paid income-tax, incurred nightly risk of destruction by fire, while those whose incomes did not exceed 100*l.* per annum, and who did not pay income-tax, experienced certain death in the event of an incendiary outbreak. That was in 1874, and since then hardly a fire has broken out in certain dwelling-houses,—originally built to hold a single family, yet filled indiscriminately with several families and groups,—where death has not resulted. Moreover, we said that drains and watercloseta were not ventilated; that the railway tunnels under London streets were pestiferous; that by the law dilapidated structures, if only proved dilapidated, could be mended up with dilapidated materials; that no official regulations concerning the use of iron girders and joists existed; that, in fine, the Building Act we wished to see would be as much an assistance to good architects as the actual Building Act is at times an annoyance to straightforward builders. In other articles we have treated of necessary modifications and absolute alterations in the current legalised method of building "fireproof" warehouses, theatres, hospitals, &c.; we have condemned the continued, unprofitable, and dangerous use of naked iron; and we have described the fœtid nature of the soil upon which in and around London new houses are erected with impunity and commercial success.

THE MODEL BYE-LAWS in certain clauses relating to foundations admit the necessity of an untainted and a concrete platform beneath every new building. None shall be planted upon any site which has been filled in with material impregnated with fœcal matter, with animal or vegetable matter. It will, therefore, be compulsory on the part of speculators to remove by excavating, burning, or otherwise, any refuse of the kind with which accident or design may have contaminated the land. Another suggested bye-law is equally important, and one that, even if the site of a new building be the surface of a quarry, must not be deemed extravagant: the site of every new building is to be properly asphalted or covered with a layer of cement concrete, at least 6 in. thick. We may add to this that ingenious minds will doubtless find a means of complying with this bye-law, without accomplishing the desired result, for an asphalte covering is of little use unless laid upon a surface of solid and compact material. It is also proposed to make compulsory the insertion of a damp proof-course in the walls beneath the lowest timbers and at a height of not less than 6 in. above the surface of the soil. This is very well so far as the prevention of rising damp in the wall itself is concerned; but a thin layer of lead, slate, or even asphalte, is not sufficient to defend a plinth of stone or unpolished granite from the injurious effects of damp earth or turf, or by falling rain, which often rebounds against the horizontal face of the plinth. It has been found in France, where huge blocks of stone are often used for the *socle* of a building,—through the entire thickness of the external wall,—that two courses of brick laid in bitumen and gravel form the best damp insulator under a façade, and for more than one reason: the weight of 60 ft. or 70 ft. of stone or brick wall has been known to squeeze out a simple layer of asphalte on either side; and the rolling of big stones upon it frequently cracks it. But the homogeneous course, formed by two rounds or even one round, of brick, laid in asphalte, is indestructible by the accidents of age or even the ordinary efforts of man.

We must break off, however, for a time.

* See *Builder*, vol. xxxii. p. 146.

FREE LIBRARIES.

A FEW years since a committee of the Society of Arts, a body that cherishes enlightened and liberal designs, and exercises its activities over a wide range in the promotion of education, art, and science, was appointed and took action, in an attempt to encourage the establishment of free libraries and museums under the provisions of the Acts of 1850, 1855, *et seq.* The *vis inertiæ* of corporations and communities stood in the way of the committee's success, and little or nothing resulted from the meetings held and the correspondence they directed. It is to be hoped that they may resume their functions, the exercise of which is fitted to prove highly advantageous to the cause of education, and in the interests of the nation.

The Free Libraries Act had a twenty years' start of the Elementary Education Act, by which, however, it has been far outstripped in the extent and promptitude with which the provisions of the latter have been adopted. During the twenty-seven years that have elapsed since Mr. Ewart's Act was passed, it has been adopted by the authorities of sixty-one cities, boroughs, and other places in England; four in Wales, and five in Scotland. London is a remarkable exception among the cities and towns under the Free Library Act. It is true that the City proper has its fine new library at the Guildhall, and the metropolis has its vast and valuable repository of learning in the British Museum, both being available as reading-rooms and places for reference and study, but neither of them serving one of the most important purposes of free libraries under the Act,—lending of books to readers to be read in their own homes. At the Guildhall, indeed, an exception in the matter of lending books is made in favour of members of the corporation of the city of London and their families, but this exception is not of any advantage to the general public. The only free library in or near London established under the Act is that of Westminster, for the united parishes of St. Margaret and St. John. This library, situated in Great Smith-street, serves a population of 66,259; there are 10,212 volumes in the library, and about 4,000 borrowers use it; the total issue for a year is 69,000 volumes. There is a branch lending-library at Knightsbridge connected with the principal library in Great Smith-street. The number of visitors to the reading-room for the year last reported upon was 113,369. In this library the difficulty of the attempt to classify human knowledge appears to have been fully experienced; "mechanical science" and "fiction" are the only two out of seventeen classes into which the books are divided that have not the equivocal tag of "&c." appended.

Vast fields in the metropolis remain open for the adoption of the Free Libraries Act; amongst others Chelsea, with a population of 260,000; Marylebone, with 500,000; Finsbury, with 460,000; Southwark, with 210,000; Tower Hamlets, with 400,000; Woolwich *cum* Plumstead, with 80,000; Greenwich and Deptford, 100,000; Lewisham, Sydenham, &c., 52,000.

In some of these districts the proposal to adopt the provisions of the Free Libraries Act has been rejected by the economists, amongst others at Woolwich, where the establishment of an efficiently furnished and conducted free Reference and Lending Library could not fail to exercise the most important educational and moral influence upon the artisans at the Royal Arsenal, their families, and others. A number of the cities and towns in England and Wales having the largest populations are under the Act, and, notably Manchester, Liverpool, Birmingham, and Newcastle-on-Tyne, but amongst the large cities and towns that have not as yet adopted it, are "proud Preston," Huddersfield, Wigan, Stafford, Cheltenham, Macclesfield, Bedford, Worcester, Reading, Devonport, York, Durham, Portsmouth, St. Helen's, Lancas., Guildford, Croydon, Dover, &c. In Wales there are four public libraries, at Aberystwith, Cardiff, Swansea, and Newport, Mon.; but none at Merthyr Tydfil, Carmarthen, or Pembroke. Among the towns that have School Boards but no free public libraries, are Gateshead, Burnley, Hastings, Hanley, Bath, Wakefield, Oldham, and Carlisle.

In Glasgow, that arrogates to itself the title of capital, and claims to be the second city in the United Kingdom, the Free Libraries Act does not find favour with the economists, who have successfully resisted its proposed adoption. Lanarkshire, wealthy and populous, so prolific

of volunteers who compete for the prizes at Wimbledon, has only one free public library, at Airdrie, of 3,284 volumes; the annual cost of the institution being under 100*l*. A joke of the Paisley folks (or "seestus," "see-est thou us," as they sometimes designate themselves) is to refer to the neighbouring pretentious city as "Glasgow, near Paisley." Paisley is certainly the superior of Glasgow in free museum and library provision: they have a valuable museum, a lending library of 11,651 volumes, and a reference library of 4,870 volumes. The lending library is used by 3,310 borrowers, and 270 persons use tickets for the reference department. The united departments are maintained at an annual cost of a little more than 500*l*. The only other free libraries in Scotland under the Act are Dundee, 30,000 volumes; annual issues, 136,162 volumes; annual cost, about 2,500*l*. Forfar, 3,183 volumes; annual issues, 9,166 volumes; annual expenditure, 78*l*. Galashiels, 2,420 volumes; annual issues, 14,448, including 75 volumes in the reference department; expenditure, 165*l*. per annum. It will be seen that of thirty-three Scottish counties only four have free lending libraries, viz., Forfarshire, two; and Lanarkshire, Renfrewshire, and Roxburghshire, one each. Aberdeen, Edinburgh, Glasgow, Hawick, Inverness, Perth, Kilmarnock, Stirling, Dunfermline, Ayr, Leith, and Berwick-upon-Tweed are not provided for. It should be mentioned, however, that there is a goodly number of foundation libraries in Scotland, some of them, such as the Advocates' and Signet libraries of Edinburgh, being highly valuable collections.

The liberality and enlightenment that have been displayed by some of the comparatively small communities that have adopted the Act ought to put to shame the inhabitants of many corporate towns and other places, who have not only regarded this important educational provision with indifference, but have from motives of mistaken economy actively opposed its application. Aberystwith with 6,720 inhabitants; Bangor and Hertford with under 8,000 each of population; Warwick, Chesterfield, and Bridgwater, with from 11,000 to 13,000 each, voluntarily pay a small price to secure great advantages not attainable by other means. The 1d. or 1½d. in the pound is the last straw of taxation that breaks the back of the anti-light or at least the anti-free library camels in communities of ten times the wealth and numbers of those named. The cost, as compared with the amount and value of the work done, and with the gratification and profit to the users of free libraries and museums, must surely be considered very moderate. There are seventy-five public free libraries in England and Wales that have an aggregate of above one million volumes, that are used five million times per annum, the borrowers or readers being 802,000. The payments on account of these libraries is 60,000*l*. per annum, or about 1*s*. 6*d*. per annum per borrower, or 1*l*. 4*s*. per 100 volumes issued per annum. The five free libraries in Scotland have 54,500 volumes, that are issued 340,500 times per annum, at a total cost of less than, 5,000*l*. per annum.

The analyses of the ages and occupations of borrowers from free libraries and readers are interesting, as showing the classes using these institutions. At Birmingham, for example, the classes include 1,088 scholars and students; 881 clerks and book-keepers; 215 apprentices, errand, and office boys; 167 teachers; 439 jewellers and goldsmiths; 137 warehousemen; 122 milliners and dressmakers; 138 printers; 35 artists; 11 clergymen; 27 button-makers; 8 actors; 141 salesmen; 67 gunmakers; 10 pen-makers; 95 electro-platers; 6 pearl-workers; 122 engravers, chasers, &c.; 15 policemen; 14 surgeons; 8 gold-cutters, and 18 gold-beaters; with a very large number of readers of a great variety of occupations. As regards ages of readers, 3,057 are from fourteen to twenty; 2,700 from twenty-one to thirty; 1,026 from thirty-one to forty; 476 from forty-one to fifty; with diminishing numbers for more advanced ages. The borrowers classified under about 300 professions and occupations are 7,500 in number for the six lending libraries and reading-rooms; the ages of users of the reference department embrace 7,688 readers, who have been served during the year with 96,732 volumes; the issues in the lending departments were during the year 305,958 to 16,948 borrowers, admitted in the course of two years. The professions and occupations of those using the reference department include 17 actors and actresses [that is, books were given out 17 times to actors and actresses]; 27 apprentices; 153 artists; 141 brass workers; 167 clergymen; 1,562 clerks; 360 engineers; 247 engravers; 491 jewellers, gold and silver smiths; 47 in the law; 27 librarians; 14 literary men, and 32 reporters; 88 physicians, surgeons, &c.; 12 opticians; 468 scholars, students, &c.; 388 schoolmasters and teachers; &c. At Bolton the library is used by 12,719 artisans; 9,701 cotton operatives; 4,094 teachers and pupils; 3,247 clergy and professional men, with remainder of 71,430 various. Young people enter largely into all the returns. At Bradford there are 447 apprentices, mill, office, warehouse, shop, and school boys, and school girls, with 55 school masters and teachers, 13 clergymen, 5 surgeons, 400 clerks, 14 artists, &c., in the lending department; in the reference department the classification includes 23 clergymen, 71 schoolmasters and teachers, 115 schoolboys and students, 230 warehousemen, and 248 clerks. At Cambridge the classification includes 2 clergymen, 33 clerks, 68 females of no occupation, 11 gentlemen, 75 juveniles and 47 schoolboys, 2 school-masters and 17 school-mistresses, 2 librarians, 2 reporters, 36 students, with many others, various. Leeds divides the readers into 13 groups, but gives, not their numbers, but the number of volumes issued to each class:—12,007 are put down to clerks, 7,721 to artisans, 3,868 to pupils, 3,804 to professional men, 2,941 to metal-workers, the remainder various. Leicester, in both departments, serves large numbers,—clickers, clerks, elastic web weavers, framework knitters, hosiers, scourers, stocking-makers, wool-sorters, with 9 musicians, 84 pupil-teachers, 137 scholars and students, 22 teachers, 30 architects, 35 artists, &c. The Manchester borrowers from six lending-libraries are classified under about 500 groups. They include among that large number 86 accountants, 20 actors, 278 agents, 452 apprentices, 111 architects, 44 artists, 4,784 office, school, shop, and warehouse boys, 3,235 clerks, 116 law clerks, 4 editors, 10 journalists, and 19 reporters; 213 drapers, 104 draughtsmen, 255 engineers, 40 gentlemen, 312 school-girls, 354 hookers, 57 nippers and cart-boys, 512 makers-up and packers, 411 pupil-teachers, 1,572 warehousemen, 279 travellers, 488 salesmen, 35 missionaries, 39 military men, 8 scripture-readers, 12 secretaries, 585 printers, 128 school masters and mistresses, &c.

Some of the classifications of occupations are embarrassingly minute, others are so vague as to be worthless. Of the former class are Birmingham, Bradford, Manchester, and Liverpool. Of the latter class Stockport is an illustration, where artisans and labourers, clerks and warehousemen, gentlemen and professionals, mechanics and engineers, pupils and teachers, are bracketed together. The small selection of examples given should suffice to show that the use and advantages of free libraries are not confined to any section of the community; they are absolutely open to all persons cleanly and well-behaved, and of good character. The value of such institutions must be apparent from the classes of persons who use them. Every free library throughout the country is taken advantage of, to a greater or less extent, by clergymen and ministers of religion, schoolmasters, school-mistresses, teachers of various kinds, professional men, pupil teachers, and many others whose object is presumably to increase their own powers for public usefulness. It is to the interest of the nation at large to aid them ungrudgingly in this laudable object, and to equip them as completely as may be possible for the discharge of their vitally-important functions.

It is a daily occurrence for men of acknowledged literary reputation, including dignitaries of the church, either to make the reading-room of the British Museum, the Guildhall library, the Record Office, or other valuable collection of literary treasures, their own workshop, or to employ deputies to work these mines on their behalf, for the materials wherewith to construct their works. And wherefore is this? Simply because the valuable works of reference available in such libraries are inaccessible to persons of ordinary, or even large means. How few clergymen, desirous to enlighten thier congregations concerning "Nineveh," could afford to purchase Botta's splendid work in 5 vols. folio, or Layard's "Monuments" in two, or even Buckingham's "Ruins"? What writer on Mexico could afford to purchase, even if it were in the market, Kingsborough's 9 vols. folio on the "Antiquities"? What ardent naturalist of humble means, and there are many such, can obtain access, except in a public free library, to such gorgeous works as Gould's "Molluscs and Shells," Dana's "Crustacea and Zoophytes," Audubon's "Birds of America," and the works, generally, of the United States Exploring Expedition; or Curtis's "Flora Londoniensis," with a host of others that might be named? Some time since a copy of Hussey's beautiful work on "British Mycology" was added to the reference department of a public free library. A working man, an enthusiastic student of fungi, took to it with the greatest avidity, and for weeks spent upon it all the time he had to spare. Who again, among historical students, has a deep enough purse or a big enough house, for the publications of the Camden, Cheetham, Surtees, and other publishing societies, for Somers's and Force's tracts, the *Harleian Miscellany*, a file of the *London Gazette*, or of the *Times*? Such works the literary man and the student can only meet with in a well-appointed free library efficiently maintained at the public cost.

Since 1870 there have been 1,600 Board schools established in England and Wales, against the seventy-five free libraries, which should be the auxiliaries and corollary of the elementary schools,—"These things ought ye to do, and not leave the other undone."

THE LANCASHIRE LUNATIC ASYLUMS.

EXTENSIVE ENLARGEMENTS.

THE whole of the four county asylums in Lancashire, already of unusually large dimensions, are about to be still further extended in size to meet the constantly-increasing demand for lunatic accommodation. At the annual meeting of the county magistrates last week it was stated that accommodation was required for 2,000 more lunatics, the asylums being completely full on the 1st of January in the present year, when the number of inmates was 6,419. The committee of magistrates having charge of the asylums reported that the necessary accommodation might be obtained by building, in close proximity to the existing asylums, annexes, capable of holding not less than 500 or 600 patients of the chronic class. Such buildings could be erected at a small cost as compared with erecting a new asylum. The committee added that for the erection of such buildings or annexes there was ample space on the lands attached to the asylums at Lancaster, Prestwich, and Whittingham, in the south-eastern divisions of the county respectively, and as to the asylum at Rainhill, in the Liverpool or south-western division, they recommended that if the land in the immediate neighbourhood could be obtained for a similar purpose, it should at once be acquired. It should be stated that Rainhill is fast becoming a favourite suburban district of Liverpool, where mansions and other residences of a high-class character are being rapidly built, and land is fast increasing in value. The magistrates unanimously confirmed the recommendations of the committee, resolving at once to enlarge all the asylums, and that the best and most economical mode of carrying out this object was by the erection of the several annexes, as proposed. It was also resolved that the new annexes when completed shall be occupied exclusively by harmless and chronic patients. In the course of the discussion on the subject, Mr. Hibbert, M.P., expressed regret that no allusion was made to the accommodation of that class of lunatics called idiots, and he incidentally stated that at the present time there were no less than 3,000 idiots within the county, between the ages of five and thirteen, a great number of whom were in the workhouses, where they were badly treated and teased by the inmates. He strongly urged that new county asylum buildings should be erected for juvenile idiots in Lancashire. The estimated cost of the several enlargements about to be made in the different asylums is upwards of 100,000*l*.

A Cemetery for Sheffield. — The Burial Board of the Sheffield township has arranged for the purchase, from the Duke of Norfolk, of a piece of ground fifty acres in extent, for the purposes of a cemetery. The proposed site is a short distance from Norfolk Park, and only a mile and a quarter from the parish church. It is pleasantly situated on an elevation, and it is intended to lay out the grounds with some pretensions to beauty. The cost of the land is nearly 15,000*l*., and the chapels and other buildings, and the necessary alterations to the grounds, will entail an additional outlay of 13,000*l*.

NOTES AT THE SOCIAL SCIENCE CONGRESS.

IT seems to be generally admitted that the Social Science Association has seldom had a more successful or interesting session than that which has been held on the banks of the Dee; and this has been not least the case in regard to some of the subjects with which we are most especially concerned. The central point of the proceedings, regarded in the light of an intellectual entertainment, was perhaps the brilliant and remarkable address of Lord Gifford, as president of the Jurisprudence Section; but the Health Section has been doing good practical work, and the Art Section, which we noted as being rather on its trial in this second year of its existence, has excited a degree of interest, and been marked for the most part by a practical character, which seems to give a satisfactory assurance that it is not a superfluous invention, but is likely to become an integral portion of the project of the Association. We proceed to note some of the points in connexion with those portions of the proceedings which seem to suggest comment or criticism.

The Health Section on the 20th (under the presidency of Mr. Chadwick), was partly occupied, and let us hope not unprofitably in regard to future results, with the health of Aberdeen, a subject in regard to which, as we have already shown, there is a good deal to be said and done. Dr. Beveridge's paper on the subject, however, was medical rather than sanitary, in the sense we have lately come to attach to the latter word, and consisted chiefly in a more or less tabulated statement of the prevalent forms of disease in the town; from which it may be gathered that the keen air and cold winds of Aberdeen, which in the present season are health-giving rather than otherwise, become, when more intensified in winter, a source of a seriously high average of lung disease in its various forms. Two noticeable facts were, the great prevalence of typhoid disease among the workers in the rag department connected with the paper works, which is so general and apparently inevitable as to lead to the conclusion that contagion is brought in with the rag stuffs imported from abroad. In connexion with another and greater Aberdeen industry, it is satisfactory to hear that the health average among the granite workers is high, especially that they are singularly free from consumption, a marked contrast in this respect to other trades in which the workmen were exposed to the effects of dust. We should rather have liked to see, in reference to the consumptive class of diseases, some statement of the proportionate average of sufferers in groups classified according to house-rental, as a broad but probably pretty correct way of showing the connexion between this disease and the class of dwellings. Union-street, when swept by an east wind from end to end, must certainly be the coldest street in Aberdeen; but then the solidly-built granite houses with which it is lined must prove better protectors against the enemy than can be found in many of the lower portions of the town, where the habitations are so much more pervious to wind and weather. A classified scale of this kind might prove a simple method of showing practically the extent of influence of dwellings upon the health of the inmates.

Dr. Hardwicke's paper on the same day, on the question, "What is the best way of providing suitable accommodation for the labouring classes, and utilising open spaces in towns, made some important suggestions, *à propos* of his description of M. Godin's "Familistere" at Guise. A notice of this paper, as of some others, we print separately. This establishment is nearly the same thing which was proposed, and for which elaborate schemes were drawn out, long ago by a French social reformer of probably equally good intentions, but very different social views, namely, St. Simon, who became, in this country at any rate, notorious rather than famous for his ideas of social regeneration, based on the abolition of the family and the conjugal tie. In all but this portentous social feature, M. Godin's establishment reminds us of St. Simon and Fourier, the whole of the inhabitants congregated in the block of building being united not only by topographical contiguity and enclosure within the same walls and roofs, but by the system by which one nursery is provided for the children, a covered courtyard for amusements and even (as it seems to be conveyed) "receptions" to be given by the inhabitants *en masse*, as one community. We can hardly feel surprised that an objection should have been raised (by Mr. Esslemont, of Aberdeen) to the idea of a system which tends so much to sink individuality of habits, and even ultimately of moral character, in the general habits and character of the community. For ourselves, we can scarcely wish (or hope) to see such a system frankly accepted by the English labouring classes; it may, no doubt, solve some material difficulties, but almost gives rise to graver social ones. The court in the centre, covered with a glass roof, is a material feature in the scheme open to much objection. In places where a number of inhabitants are collected whose occupations do not conduce to cleanliness, and whom it is difficult to induce to look sufficiently after ventilation, the securing of plenty of air is always one of the very first considerations, and a contrivance which prevents the free circulation of fresh air seems likely to create more evils than the convenience of a covered court, in some respects great, will at all counterbalance. We cannot but feel some sympathy also with Mr. Raper (of Manchester), who deprecated so strongly the idea that the Social Science Association should appear to the public as having a mission to dispossess the working man of his home. The consideration is a most serious one in regard to its influence on social life, though, of course, we are the last to deny the immense difficulties in the way of providing healthy homes for the poor, and can hardly deny that it is better to live with a certain loss of privacy in a healthy building than to take bad air and drainage with all the privacy possible.

We may digress from sanitary matters for a moment to take notice of the discussion on the 20th, in the Economy and Trade Department, of the question of the social effects of trade-unions, strikes, and lock-outs. This was treated in two papers by Dr. Watts (who, however, was not present at the meeting) and by Mr. John Grey, and succeeded by a discussion, the result of which was not incorrectly summed up by the chairman as showing that the difference between the two parties concerned in strikes was not so great as was supposed. This is what every one is beginning to see, at least if we take it to refer to the real difference between what is for the interests of masters and of men; but as to the ostensible difference in their demands, it appears to us that this is about as distinct and marked as it well can be, in the attitude assumed by the bodies or the officials of the bodies representing them respectively in the strife of strikes. It may be true, as Mr. Chadwick observed, that a little pressure from a secretary of a union upon a capitalist was a healthy thing, though it might perhaps be questioned which of the two parties to the proceeding, the capitalist or the secretary, experienced the healthy influence. Our impression has been that the kind of hostile, bitter, and uncourteous tone which this sort of "healthy influence" generally seems to take is a thing very disagreeable to witness, and not calculated to bless either him that gives or him that takes. Turning to the papers read, to see if any new light is thrown upon the difficulty, and the way out of it, we observe that the first paper is obviously written with an anti-strike feeling, and that of Mr. Grey with the reverse tendency, and that the main feeling of the meeting seems to have been with the former. A clerical speaker on the occasion made some very disjointed complaints against Dr. Watts's paper as a furbishing up of old arguments against strikes; the arguments may be old, but in so far as they were good at starting, they are none the worse for keeping. We may draw special attention to two observations made in the course of the discussion, which acquired an additional point from the quarters from which they respectively came. Mr. W. Hoyle (Tottington) had been both a labourer and an employer of labour, at different periods of his life, and gave this as the result of his observations, that "while trade-unions assist to raise wages, yet by keeping people out of employment the effect was, on the whole, to keep wages down in another direction. The result was not useful, but, on the contrary, detrimental. Combination should be directed towards the benefit of the general public, and not of a section of it." This was capped by the remarks of Mr. Lindsay, a barrister, who observed that trade-unions seemed to have set their faces against the right of every man to make as much by his labour as he could. "Every collier, like every barrister, should be allowed to earn as much money as he could without the interference of any union." There is no doubt another side to be considered in reference to these points, but we cannot help observing that the apparent concurrence of an important meeting in views such as were here expressed is a fact of some significance, which the organisers of unions would do well to ponder. The special method of meeting the question which was proposed in Dr. Watts's paper was that of compulsory arbitration. We give his conclusion in his own words:—

He thought that, while union amongst working people for good objects,—such as the support of the sick or accident fund, or fund for the removal from place to place according to the state of trade,—was very commendable; still, on the other hand, when the principal object is to raise the price of wages and shorten the hours of labour, these objects are very questionable, because all that could be said in their favour was that they had only accelerated by a very short time a rise in wages, which, from an influx of capital, would take place in the course of events; and as to strikes as a *dernier ressort*, the demoralisation is wholesale, the employment of the capital is dissipated, families become disorganised and driven into debt and penury, and an evident breakdown of all self-respect when obliged to seek parochial relief. The only practical relief out of the difficulty seems to rest in *compulsory* arbitration. Then strikes would be at once abolished, and workmen would give up the restrictive rules which have not protected them, and ultimately the workman would rise to the level of an employer. Then it would be that workmen would work with zeal and energy, and learn that work is not only worship, but progress also,—is development, civilisation, and that in working with enthusiasm they will find that these principles are applied and made fruitful for the good of the many.

In the Art Section the question as to the restoration of ancient buildings was opened in an able paper by Mr. Aitchison, who has won golden opinions among the lovers of art in Aberdeen for the ability, good sense, and artistic feeling which he has shown in his contributions to the discussions on art. The paper, which we print elsewhere, speaks for itself; the line it takes is one which is quite right as far as it goes, but may be complained of as emphasising one side of the question at the expense of the other,—regarding the buildings from an almost exclusively historical point of view, as records to be preserved, and almost ignoring the practical and architectural side of the subject. The paper, in fact, represented the views of the new anti-restoration Society, which views seemed, on the whole, to be in the ascendant at the meeting. Mr. E. M. Ward, however, in commenting on the paper, went so far in the other direction as to wish for the removal of some of the Westminster Abbey monuments, as disfigurements of the architecture; a view which is quite open to consideration, though we are inclined to think that there are objections to the removal of monuments too strong to overweigh their unsuitability as works of art. There is, however, the other side of the matter to be considered, the aspect of buildings as architectural designs, their practical use (which necessitates keeping them in proper repair), and the right of those who occupy them to beautify and decorate them when they become worn and dilapidated even in appearance. This side of the question was brought forward by Mr. Statham, in the course of the discussion, while Mr. J. J. Stevenson, on the other hand, upheld uncompromisingly the theory that so long as a building represented history it should be left entirely untouched, and brought forward, among other things, as an example, the determination of the decorative firm of which Mr. W. Morris is the head, to refuse to put even any new stained glass into ancient buildings. The firm in question, it appears, have a printed circular prepared which they send round to every one who invites them to put a window into an old building, stating their reasons for declining, out of reverence for the ancient work. They have, of course, lost commissions in this way, and no doubt the decision is in one sense honourable to them, but their position seems to us wholly untenable. Mr. John F. White, of Aberdeen, whose enthusiasm for art, combined with his knowledge and cultivated taste, made him an invaluable ally in the art-section, urged a much more reasonable and moderate view of this stained-glass question, only recommending that glass put into old buildings should be not only of good design but of fine and rich texture and material, and denouncing the "thin

glass" which had been inserted into many buildings. Mr. W. Brodie, the sculptor, and member of the Royal Scottish Academy, made some very sensible observations, comparing the case of an old building with that of an old piece of sculpture, which might be weatherworn and nearly obliterated, but which he would nevertheless wish to see left, to tell its own tale in its own way, while if a new statue on the same subject was for any reason desirable, he would erect one beside the old one, without touching the latter: and asked, why could not the same principle be followed out in regard to old buildings? Well, a building is not exactly the same thing as a statue; it covers more ground, and, if of any size, costs much more, and was put up for use; still, there are cases in which such a method as this might well have been adopted,—cases in which an amount of money has been spent in destroying an old building, as an historical monument, which would have sufficed to build a new one, and save many heart-burnings and lamentations over the loss of what cannot be replaced. But such cases are very few.

A feature in the discussions of the Art Department was the attempt made by Mr. Lindsay, who spoke very ably and with evident interest in his subject, to recommend the religious or "Catholic" aspect of art, and to deprecate the use of Pagan and sensuous subjects as material for artistic creation. This was *apropos* of Dr. Phené's paper on "The Humanising Influence of Art," Mr. Lindsay urging that art could only in truth exercise such an influence when it had a basis of moral and religious feeling, and was not regarded as a mere æsthetic recreation. His remarks were received with considerable applause; but our impression is that most of the audience did not see exactly what the speaker was aiming at. Mr. Lindsay's recommendations included the opening of museums, &c., on Sundays, of course on grounds and in a spirit different from that on which the same system is urged in some other quarters. As to that we presume no sensible people have any real difference of opinion, except in regard to the practical difficulty of providing adequately for the day of rest for the attendants at public places; but the main question which was thus urged, that art should be essentially religious and moral, is based on a fundamental error in regard to the object of art, and the manner in which it appeals to us. A work of art may incidentally be a tonic to the moral feelings,—perhaps we may say that every really great work must and should be so—but its office is not didactic; and when works of art were really didactic, and were made the means of conveying truths, or supposed truths, to the people, it was when they were not really regarded as art at all in the sense in which the word is now used, and always has been used, in the literature of cultured nations. So much on a subject which we have often had occasion to touch upon, and which is far too large to be gone into argumentatively in the course of an article of this kind.

We will resume the general summary in our next.

THE METRICAL SYSTEM.

THE usual fortnightly meeting of the Liverpool Engineering Society was held on Wednesday evening last, Mr. H. O. Baldry, vice-president, in the chair. Mr. E. Dukinfield Jones read a paper on "Some of the Advantages of the Metrical System." The object of the paper was to show the saving of time and labour in calculating quantities, heights, and distances when measured by the metrical system, as compared with the standard English measures. As a practical illustration, the author prepared two working sections of the same piece of railway, with the distances and heights plotted in one case to the English, and in the other to the metrical, system. From these diagrams the difference of the two systems, as regards the horizontal distances, was not very striking, but the vertical heights showed at least 20 per cent. more figures in the English than in the metrical system. If the cubical contents of cuttings and embankments had been marked on each section, the difference would have been even greater. As regards the compulsory introduction of the system into England, Mr. Jones anticipated no insuperable difficulty. He was himself in Brazil during the introduction of the metrical system into that country, and he stated that it was adopted quite easily, and without complaint.

THE LATE MR. FOX TALBOT, F.R.S.

BY the death of Mr. Fox Talbot, which took place at Lacock Abbey, Wilts, on the 17th inst., in his seventy-eighth year, science has lost a distinguished votary and the world a benefactor. He had nearly perfected his invention of practical photography when M. Daguerre announced his invention and received immediately a pension from the French Government. We can remember the reading at the Royal Society of Mr. Fox Talbot's first paper describing his system, and the annoyance caused by his being to a certain extent superseded. In some of the first published accounts of the science Mr. Talbot's name was not even mentioned. Speedily, however, other inventions having been added, Mr. Talbot's system was everywhere adopted. In the first instance he took out a number of patents with a considerable expenditure of money, but he ultimately threw the whole matter open to the public, creating a new industry; and thus enabled thousands of persons to maintain themselves and to delight the world. He well deserved some public expression of gratitude. His first glass house set up on the residence of Mr. Murray, the optician, in Regent-street, was arranged and superintended for Mr. Talbot by the conductor of this journal, as was afterwards a larger one in the Kensal Green-road. Of later years Mr. Talbot had resided chiefly at his country seat, varying his experiments in chemistry and photography with the study of the various dialects of the East, and especially of the cuneiform inscriptions made familiar since the discoveries of Layard and Rawlinson.

"THE STORY OF OUR GOVERNMENT OFFICES."

SIR JOHN ST. AUBYN, M.P., opened a fine-art exhibition at Penzance on the 10th inst., and in the course of an address he remarked that Lord Sandon, recently, at Liverpool, speaking against the appointment of a Minister for Science and Art, said it was much better that science and art should always be independent of the State. No doubt this was true. It was perfectly true that art was independent of Government and of the forms of government; but if the establishment of a Department of Science and Art in this country could do no good, it was, at any rate, quite possible that it might prevent a great deal of harm. The position of art in this country, considered in relation to the State, was not a satisfactory one. Let them, for instance, consider what took place in London at this moment. If a public edifice was to be erected or a monument set up, there was a department of the Government known as the Board of Works, which took cognisance of those things; but this was done in an indirect, irresponsible, and unsatisfactory manner, and when anything had to be done the Government, or even the Prime Minister himself, had to interfere and set things right. He remembered perfectly well when the new Government Offices were in course of erection. There were numerous plans suggested for the consideration of the Government, and the Board of Works fixed upon those which they thought would be best for the purpose. But then Lord Palmerston himself came down and said he would have nothing of the kind, and that there should be no Gothic architecture; that it was all very well for a cathedral, but it was not fit for Government buildings. Let them take another instance. A gentleman of large means and patriotic motives and intentions had presented this country with Cleopatra's Needle. It was now on its way home. But when we had got it we really did not know where on earth to put it. All kinds of suggestions on the subject had been, and were still being made, and those suggestions would doubtless have to be taken into consideration; the Government in this instance being represented by a gentleman who held the office of First Commissioner of Woods and Forests, and who was not selected on account of any special knowledge which he had of works of art. There had been lately established a society for the protection of churches from restoration, and what was now wanted was a society which should be supplemented by Parliament to protect London from being "adorned" with the buildings that were every day being put up.

A New Reservoir, at the top of Headington-hill, to supply the University and City of Oxford with water, was opened on Wednesday last.

THE ART OF PORTRAITURE IN SCOTLAND.

LORD RONALD LEVESON GOWER'S address, as President of the Art Department of the Aberdeen Congress, dealt with the interesting subject of the rise and progress of the art of portraiture in Scotland. Few royal houses, he said, had shown greater appreciation of the arts than that of Stuart. One of the earliest portraits of the royal race of Scotland is in the city of Aberdeen: it is a head in fresco of William the Lyon, and is a work undoubtedly of the thirteenth century. It is supposed to have been painted for the monastery of the Trinity Friars; and this fact attests that even at so early a period the kings of Scotland patronised the arts. The wars and religious feuds that raged in Scotland in the latter part of the sixteenth century scared for the time all attempt at art from the country, and buildings, such as the cathedrals, were laid in ruins. Under the reign of James VI., however, art again appeared. It was at this period that Scotland at length produced an artist worthy of her name and fame—George Jamesone, and on visiting Aberdeen for the first time, he (Lord Gower) must confess to a feeling of some surprise and disappointment to find no memorial commemorating the name of an artist of whom all Scotchmen should be proud, and especially his own townsmen. For with George Jamesone commences the grand muster-roll of Scottish artists. He was the precursor of such men as Ramsay and Raeburn, Wilkie and Allan, Watson, Gordon, and Dyer, and John Phillip, and of two living Scottish artists, Sir Daniel Macnee, and one who was present that evening—George Reid, who, although still young, had already given proofs of high talent in portraiture as well as landscape painting. Aberdeen had much reason to be proud of this her foremost living painter. I believe, continued his lordship, descendants of this old painter are still living, and it seems strange that none of them should have commemorated by some token in his native city the name of one who has been justly termed the Vandyck of Scotland. (There is a fine window named "The Painters," in the cathedral of Aberdeen, but this is not sufficient for such a town to be content with in reference to George Jamesone.) It appears that even in his lifetime his native city did not do him much honour, as a tradition reports that he was offered so paltry a sum for a fine full-length portrait he had painted of Charles I. by the Corporation of Aberdeen, that he refused the shabby offer in disgust, and soon after left Aberdeen to settle in Edinburgh. He had married a fair Aberdonian, one Isabel Tosh, and through his daughter, who was three times married, his descendants are still found in the land. Jamesone's principal patrons were the family of Marr and that of the Campbells of Taymouth. For the latter he painted a huge genealogical tree, with representations of the chiefs of the house of Bullock up to very pre-historic times. His fame does not rest upon such fanciful works, but on the portraits of the greatest and best-known men of his day, many of whom figured in the civil wars. The termination of these wars and the tragic end of his sovereign Jamesone was spared the sorrow of witnessing. Charles, one of the best judges of a good painter, was delighted to sit to a native artist, and you all probably know the story of the courteous king insisting on Jamesone (who suffered from some complaint in his head) remaining covered in the presence. More than a century intervenes after Jamesone's death before a Scottish portrait-painter becomes conspicuous. Although many artists of a certain calibre exercised their trade in the north, it was only at the accession of George III. that a Scottish portrait-painter becomes fashionable in both kingdoms. Up to that time Lely and Kneller had kept out all artists from reaping a golden harvest at the court of St. James. The court painter of the third group was born at Edinburgh in 1713. His father was the well-known poet, Allan Ramsay, and young Ramsay was also proud of his blood-relationship to the noble house of Dalhousie. Few artists' lives have been so conspicuous for their great and immediate success as that of Allan Ramsay. In a few years our painter had amassed a handsome fortune, and life seemed to have showered all its best gifts on him, when an unlucky accident shattered his constitution, and after in vain visiting Italy in search of health, he died in Paris on his return homewards, 1784. Ramsay has left few portraits of excellence. He was a refined, and to use an abominable expres-

sion, but one which qualifies his style of art, an "elegant" painter; he almost rivalled Nattier, and Dronais, and other French artists of that era of powder and patches in his skilful imitation of the lustre of silks, and the richness of satins, but he failed where failure to a portrait-painter is most disastrous: he could not paint flesh; his portraits are weak and chalky in colour, and entirely lack animation and expression. To sum up in one sentence Ramsay's merits and demerits, I should call him the Scottish Winterhalter. While Ramsay was painting at St. James's, another Edinburgh artist was making a name north of the Tweed,—this was Alexander Runciman, who was distinguished for the power and brilliancy of his colouring, but he painted for and with the fashions of his day, and the result has been that he has left no abiding name in the annals of the art. To his praise, however, it must be conceded that he was an excellent teacher, and like poor Haydon in England, must have understood the science of painting better than its practice. Two of his pupils turned out very well, one as a landscape-painter, the clever father of a cleverer son, namely, Alexander Nasmyth; the other David Martin, whose portraits were in great vogue in Edinburgh some seventy-six years ago. Referring to Henry Raeburn, his lordship said,—Until the exhibition last winter in London of works of the old masters, where a large number of Raeburn's works were seen, few who had not visited the Scottish National Gallery knew what manner of painter Raeburn was,—and to many this discovery came almost as a revelation. Seldom has a portrait-painter been more fortunate in the subjects whose lineaments he has handed down to posterity. Raeburn was eminently gifted in the power of expressing the intellect of a head, and when we remember who the men were who sat to him, we recall the names and faces of those who earned for Edinburgh the appellation of the "Modern Athens." While Raeburn was engaged in his work of portraiture, another Scotch artist was illustrating the history of his country, and in Sir William Allan Scotland may claim a talent and a reputation which I can give no higher praise than in ranking with that of one of the greatest of England's historical painters—to Edward Matthew Ward—whom we have the pleasure of seeing among our distinguished guests on this occasion. I come now to the name of one of the most original, if not the most popular and original artists, that the isles have produced, for, with the exception of Hogarth, no painter has shown greater originality in his works, nor have those works been more deservedly appreciated, than David Wilkie. That Wilkie, however, with all his talent, had failings in his art, not even his greatest admirers will deny. His colouring was not of the best kind, and, like Landseer after him, his pictures look better in the black and white of the engravings than when seen even in the original colour in which they were painted. He too, like Sir Joshua, had a most unfortunate habit of using all kinds of ashpaltums and mediums, which, especially in his later pictures, have been the means of almost destroying them. Wilkie too, was essentially, to use an untranslateable French idiom, a painter of "*genre*." This he ought to have known; but as you are all aware, after his visit to Spain, he changed his style, and painted historical subjects. Talking of this reminds me of a pithy remark which Mr. Carlyle made not many days ago. He was speaking to me about Sir David Wilkie, and he said, "Ah, poor fellow, they made him paint historical subjects which did not suit him." I believe Wilkie's works—his portraits and historical subjects not included—will be remembered long after the actual paintings have disappeared. The engravings, from the finest steel impressions to the roughest of wood blocks, have sown them broadcast through the land. I doubt if there is a house, or even a cottage, however humble, in Scotland, on the walls of which you may not find a print after his "Village Politician," his "Reading the Will," "The Blind Fiddler," or "The Rent Day." I believe a more truthful, a more guiltless, or a more loveable character than that of David Wilkie never breathed; his is a household name in Scotland, a name which is loved and honoured wherever a Scotsman has settled,—and what corner of this earth has not improved or been improved by such a happy event? After alluding to three artists of Scotland who attained celebrity in painting in miniature—John Bogh, Stewart, and Sir William Ross — Lord Gower referred to the deaths of Sir John Watson Gordon and Mr. Wm. Dyce, and continued,—I come now to another name, to another celebrity, born in this city—alas! John Phillip, he too is numbered with the dead. It seems to me that in recapitulating these honoured names, my feet, like the friar's in "Romeo and Juliet," "stumble at graves." Within a very few years we have lost Watson, Gordon, and Dyce, John Phillip, and Edwin Landseer—in less than ten years all these have died. Dead, but not entirely dead, for surely the artist's work, which is his mind, his soul, his strength, and his renown, live after "the mortal coil" has been shuffled off. I should like to have said a few words to you regarding your great townsman, John Phillip, but time forbids. I believe he will be regarded as one of the greatest painters of his time—where Wilkie was weakest Phillip was strongest—in colour. As a portrait-painter, he has left some fine works, two of the most successful of these, portraits of the Prince Consort and Provost Blaikie, adorn your Town-hall. My remarks on the principal artists of this country will perhaps have appeared somewhat meaningless on an occasion like the present, but I have had some reason in alluding to their careers, for I have found that, with but rare exceptions, those who have succeeded best have studied in Rome. Does this not point to the desirability of our young and rising artists being enabled to make that voyage,—so easy, comparatively, in these days of steam,—and to prosecute their studies on that artistic soil? In France we have an example to follow—in Paris, which has greater advantages in the way of public galleries and museums than any other Continental city, the ambition of every young artist is to gain that prize which will enable him to visit Rome, and to be maintained there for a time sufficient for him to benefit by the visit. Why, I demand, should this country not do the same, and by enabling the student (however poor his means and humble his station) to study the masterpieces of the ancient and modern world, strengthen and maintain the spark of genius which, if left to struggle on in a less artistic soil, might never burn clear. How many, perhaps, for want of such assistance, have been "born to blush unseen, and waste their sweetness on the desert air." Who can say? Before I conclude these, I fear somewhat disjointed remarks, I would add in conclusion that it seems to me desirable that a town such as this, with its population of over 80,000 souls, ranking third in Scotland, with a history and traditions dating back 700 years, and above all with its proud list of artists born within its walls —a list second, I believe, in importance to no city in the kingdom, London excepted, including names eminent in the arts of architecture, of sculpture, and of painting; in the former, Archibald Simpson, who has left monuments in this city of his skill imperishable as the granite of which they are formed; in sculpture, the name of the lamented Alexander Brodie, whose early death may be considered a national loss, and another name, that of Sir John Steell, the sculptor of some of the finest statues in Scotland, long may he be spared to add fresh honour to this art, and new works to those with which for half a century he has adorned his country; and in the art of painting in the past such names as Jamesone, and in our own day those first-rate artists, John Phillip and William Dyce. I say that, recollecting all this, I cannot but marvel that Aberdeen possesses as yet no local museums for sculpture and painting worthy of the memory of her distinguished citizens. Is it too much to hope that the effects of this Congress may be borne out in forming a gallery worthy the ancient fame of this city; and that future generations of Aberdonians may be enabled to study the works of their former townsmen, collected and treasured in the city which they loved so well, a city which owes so deep a gratitude to those its illustrious sons? We have seen such a building at Liverpool—the gift of a single individual. Could not a town like Aberdeen do likewise? Is it then, I repeat, to be too sanguine to imagine a stately building rising by the shores of your beautiful Dee, which shall contain art-treasures to prove that in a northern city, and under a sullen sky, artists of high merit have lived and wrought, artists of whom Italy might have been proud, and to whom Scotland should be grateful?

Lord Aberdeen having proposed a hearty vote of thanks to the reader,

Lord Ronald Gower, in reply, said he was very much touched by the kind way in which Lord Aberdeen had spoken of him. It had been a pleasure and an honour to him to appear in so magnificent a city under such circumstances, and, as he had said, he felt utterly unworthy of the place. It seemed more like a dream than anything else, being there as President of the Art Department. To have given satisfaction this evening was the greatest honour and delight to him.

HOW CAN ART BE BEST INTRODUCED INTO THE HOUSES OF PERSONS OF LIMITED INCOME?*

WE all know that wealth is not necessary to the perception and enjoyment of art. But there is an impression among many that the possession of beautiful things is a luxury of the rich, and it is a very common saying, "I have not money enough to indulge in art." Now, if this impression were correct, art should occupy a second-rate position among the aims and objects of study. It would be undeserving of the attention of any except of *dilettanti*; interesting undoubtedly to a few, but, from its narrowness, without any claim to the sympathy of a wider circle. The pleasures, however noble, of a limited class cannot be attractive to those that are shut out from a share in them, and art, if so restricted, would deserve to forfeit the love and interest of those that care for the general good of society. But it is not so; and the existence of an Art Section in the Association for the Promotion of Social Science shows that here at least this error does not obtain. It does not, therefore, require proof from me that art must be for all, if it is to have any real interest for us, and be catholic and universal, like mother Nature, whose image and superscription she bears. Nor shall I spend time in proving that, even for the sake of art itself, the love of it must be widespread and deeply penetrating in many directions if it is to have a real vital existence. The roots of the tree must strike far into the soil if it is to bear noble branches and rich fruit. On this point I shall content myself with saying that, in the palmy days of art in Greece, everything was made beautiful, from the statue down to the chair in common use, and to the coin that passed from hand to hand, and that in Florence and Venice, in the fifteenth and sixteenth centuries, the best artists not only painted beautiful pictures, but also the panels of marriage coffers; nor did they disdain to ornament earthenware plates or to work in gold and silver. In our own country we know with what love and zeal Josiah Wedgwood shaped and decorated the commonest jugs for every-day use.

Why, then, should it be impossible for us to attain to the level of these ages? There is but one obstacle, the want of a hearty love for and sympathy with art, among all classes of the community. There would be no lack of artists even in our northern climate, for our race has not degenerated, though men like Phidias and Michelangelo will always be rare gifts to the world. If we could only have the pride which the Greeks had in the ornamentation of their cities, or the triumphant joy of the fellow-citizens of Cimabué when they carried his Madonna on their shoulders to its resting-place in the Church of Santa Maria Novella, fit men would soon be forthcoming. The artist is the outcome of the spirit of the time, moulded by it, but himself creative of a still higher order of things. This has ever been the course of events in the history of art; aspiration, enthusiasm, progressing till the love decays, and then come mannerism, affectation, feebleness, and ultimately death.

I assume, therefore, in this paper that there must be a deep love for art, a passion for beautiful things of all sorts. If this exists in the individual, all will be well, however limited his means, just as we have seen in the case of nations and cities. The title of this paper, "How can Art be best Introduced into the Houses of Persons of Limited Means?" is misleading unless the love is already there. Art cannot be introduced into houses like water and gas. In one and the highest sense, it must be already in the house, seeking only how it can best manifest itself and clothe itself in visible form. I should, therefore, prefer to speak of "Art in relation to limited incomes," and attempt to show that there is not a room of the humblest mechanic that may not be made a beautiful home.

I have assumed, as a necessary postulate, that the love exists, ignorant, it may be, but seeking

* By Mr. John Forbes White. Read at the Aberdeen Social Science Congress, September 25th.

for light. How is this to be attained? There is but one answer,—By using our eyes. We must learn to enjoy the beautiful things around us in every-day life, to note the beauty of the passing cloud, and of the world of colour at our feet, to observe them both analytically and synthetically. Close examination will reveal beauties of colour and of form with which the man of science does not concern himself, for they are variable, and therefore excluded by him in his classification; while, by noticing the relation of the component parts of the landscape, the harmony of form and colour, and the distribution of light and shadow, all uniting to make up one whole, we shall come to understand what the greatest artists have put before us in their representations of the breadth and simplicity of nature, as also of its variety, subtlety, and mystery. We must note specially the action of light and air in everything, giving here sharp accent and there delicate shading or vigorous relief, varying, for example, what seems a self-coloured petal into many shades of the same hue, full of delicate gradations. By observing carefully the play of light on the objects around us, we shall come to understand what artists mean when they speak of "quality," which tries to give us the changes of local colour that are produced by the influence of the light and air. Thus, if we look carefully at any face, the more unobserved the better, and watch how the modelling of the muscles is produced by the varying degrees of light and shade, much more than by outline, we shall come to understand the aims as well as the difficulties of the sculptor and of the painter in their portraiture of character without too much emphasis, or in seizing a passing expression without exaggeration. We must, in fact, set to work in viewing the common things around us as an artist or as a student would, and, even if we do not use a pencil, we shall at least come to understand the principles that have guided great artists, and be able to sympathise with their work, the next best thing to producing it. As Mr. Ruskin has well said, "All judgment of art finally founds itself on knowledge of nature." If to this careful study of nature we add, as we have opportunity, an equally careful study of the best of the old masters, and of the best workers in every material, we shall gradually arrive at some knowledge of what is best in art.

But, with so high a standard, how can the man of ordinary means expect to find anything that is good in point of art, and at the same time within his reach? I hope to be able to show that it is possible to make a house beautiful, and to enrich it with things that will gratify a cultivated taste, without any large expenditure, though, of course, fine pictures cannot be promised on these terms.

And first as to the colour of the walls. On this point I cannot do better than refer to the most recent scientific treatises. Mr. Church, for example, tells us that for walls nothing is better than the tertiary hues, of which the number is almost innumerable. They afford a quiet background, which may be enriched to any extent by complementary colours, and he adds, that the effect of the *dulled* colours—that is, more or less mingled with grey—is to relieve the fatigue experienced by the eye when occupied too exclusively with others of great brightness and saturation, enabling these bright colours, when used sparingly, to give their maximum of pleasurable sensation. Here we have science confirming all we have learned in our study of Nature, which is so sparing in her employment of bright colours, using them only as enrichments. We should be shocked if we saw a gaudy background in a picture, and yet we are content to live in rooms so hideously painted or papered that even our ladies' complexions are robbed of their beauty by the background against which they are set. As this is demonstrable by science, our ladies should look to it, and prefer colour that will enhance rather than destroy their good looks. Any quiet tertiary colour that will suit *them* will consort well with the furniture, and with anything we may hang on the walls. The lower plinth or dado should be painted in oil colour, as being more lasting, but the upper part may be in distemper, which is cheap enough, and it has the advantage, as the *Lancet* has been telling us lately, of being more conducive to health than wall-paper. This method of decoration has a special claim on our consideration to-day, for the reason that a room treated in good colours, *however simple the scheme may be*, will be in equally good taste with a more splendid one, in which the ornamentation, on the same principles, has been carried to a higher point.

We are apt in this country to neglect the ceiling, and to leave it of a ghastly white colour, forgetting that it is a most important feature of the room. But it should be remembered that in the best periods of Classic, Italian, and French decoration, the ceiling received special attention. If we cannot afford to decorate, we can at least tone it to a pleasant colour. Into details on these points I do not enter, as they do not come within the scope of this paper. But there is one point that requires to be mentioned as bearing on cost, and that is the use, or rather the abuse, of gold. Nothing is more beautiful than gilding in moderation; its value is great in enriching an incised line or giving sparkle to the projecting edge of a surface in relief, or in heightening the effect of neighbouring colour; but when used in large masses it becomes vulgar, from the ostentatious use of the most precious metal. Here, as in many other parts of domestic arrangements, economy and good taste go together.

It is not necessary to go into details about furniture, as the subject has been well handled by Mr. Eastlake and other writers. But, from the point of view of this paper, it is well to insist on simplicity and suitability. If the forms are simple and the ornamentation structural, we *ought* to be able to get beautiful things at a moderate cost. But this sort of work is not in demand, and there is little temptation to the makers of furniture to produce it, since meaningless curves and ornaments stuck on here and there meet the general taste. All this exuberance of misapplied ornamentation means money, though machinery and the constant repetition of the work tend to cheapen it. It is surprising how enduring is the vulgar rococo style of Louis Quatorze, while that of the better periods has left little trace on the general taste, and this, too, in spite of the fact that all those contortions of wood, more or less cut against the grain, are necessarily weak. It should be remembered that in the best periods of Greek, Italian, French, and English furniture, the style has been architectural, that is to say, reproducing the forms, mouldings, and ornaments characteristic of the time.

Regarding the floor, we must keep in view that it is a plane surface, and we should not in our carpets go in for elaborate effects of light and shade. There should be no representation of objects in relief, to make us feel as if we might trip over a bunch of roses or a heap of ferns. Nor need I say much about hangings and such like. As to curtains, they may be plain enough, if the material and colours are well chosen, and they may be best and most cheaply hung from a brass rod, as in the old times, to answer the purpose for which they were intended, viz., to modify the light and exclude draughts. The gilt valances that are so common are both ugly and costly, and are a mere make-believe, as they have no connexion with the curtains which are suspended from a concealed iron rod. If the materials of the curtains are suitable, they may be worked on and embroidered by the clever fingers of the ladies of the household, who will find this occupation full of interest, and affording abundant room for fancy in carrying out designs that can easily be got. This remark leads me to observe further in regard to ladies' work generally, that there is no reason why they should not aim at making their own dresses artistic and beautiful. The difficulty here is not that arising from limited means, but from the iron rule of fashion, which compels all, whether short or tall, stout or thin, brunette or blonde, to dress more or less in the same style. The subject deserves careful consideration, and has been thought worthy of very full treatment by so eminent an art-critic as M. Charles Blanc.

In such a household as that which we have been describing, there will naturally be a craving to adorn it, and to sweeten life by the gathering together of beautiful things. How is this to be best accomplished? What should be chosen and what avoided? Much will depend on the amount that can be prudently expended; but whether this is much or little, the same principle should guide us, and that is, that what we select should be the best of its sort, avoiding everything that is an imitation of what it is not, or which does not, in its own department, reach a high degree of excellence. Of course, no one would mistake a plaster bust for the original marble; still less can there be deception if the original is well known to be in the British Museum or in the Louvre. Only one museum can possess the original; others must be content with plaster casts, but these are so perfect that they find a place in every national collection of Europe. And they are so cheap, that we can get them from the South Kensington authorities, or from the well-known *atelier* of Mr. Brucciani, of Covent-garden, for sums varying from a few shillings to a few pounds. Any of the slabs of the Elgin marbles, containing the horses of Phidias, one or two of which would be an ornament to any hall, may be had for twenty-four shillings, and these are noble examples of Greek art. Or a copy of the Venus de Milo, reduced in size, may be got for half a guinea. The choice is, practically speaking, unlimited. If the texture of the marble is not there, we have at least the dream of the sculptor,—everything that can satisfy the most fastidious taste.

It is very different, however, with reproductions in colour. It is impossible, by any number of successive printings from blocks charged with colour, to convey to paper the infinite touches of the painter, each laid on with a special purpose. Oil pictures and water-colour drawings are too subtle, at least if they resemble nature, to be copied in this mechanical fashion. The printing-press of the producer of chromo-lithographs and of the still more objectionable oleographs, can never compete with the brains and heart of the artist, for both of these share in the production of every good work of art. These spurious imitations are, therefore, to be avoided. It is true that some chromo-lithographs are not to be distinguished at a glance from the copied water-coloured drawing, but then it must be remembered that such a drawing has generally been painted with a view to this process, and is therefore more or less unlike nature. Nor does the evil end here; for these chromos are in their turn used as copies in many drawing-schools, to the utter destruction of our sense of the beauty of nature and of the power of comprehending it. One or two exceptions must be made to this statement, as in the case of the coloured woodcuts of Mr. Marks and Mr. Walter Crane, which, though intended for children, yet give delight to older people. It would be difficult to praise too highly "The Baby's Opera," by Mr. Crane, the cuts for which have been so admirably engraved and printed in colours by Edmund Evans; but it must be observed that they are quaintly conventional, and that they do not pretend to imitate nature.

In all reproductions we must remember that the nearer we can get to the artist the better, and this getting close to the first conception is within our reach in the very case where we most desire it. There are no more valued treasures of the galleries of Europe than the drawings of the old masters, and these are at our service for a few shillings each, permanently printed by the autotype process, which reproduces the originals exactly in every respect, except as regards the quality and texture of the paper. So far as the spirit and intention of the artist are concerned, there is little wanting. The choice here is very large, and we may select, according to our preference for certain artists or schools, any of the most famous masterpieces. And, though paintings cannot, as a rule, be photographed without losing much of the beauty of relative tones, red and yellow becoming too dark, while blue passes into grey, yet, luckily for us, the palette of one of the greatest, Velasquez, was so simple that we can study in the photograph his wonderful execution, and see with what consummate skill he handled his brush and applied his colours, at the same time enjoying to the full his masterly grasp of character, the portraits being apparently mirrored in the painter's mind.

Photography is a valuable auxiliary, but we must be careful not to rely on it too much, especially in views taken from nature. The greens, which form so large a part of the landscape, come out much too dark, so that the whole scheme of colour is thrown out of joint. Still, for studies of form, especially of foreground and of animals, for old buildings, and for memoranda of cloud shapes too transient to be seized by the pencil, the records of the camera are useful to the artist and pleasant to look on. As to coloured portraits, it should be kept in mind that the beauty of a photograph lies in its delicate gradations, which are pretty sure to disappear unless the painting is undertaken by the really good artist, and it is more than likely that he would refuse to touch it. I need hardly say that life-sized photographic portraits, with all their exaggerations, are to be viewed with horror.

Photography has led to the discovery of many processes by which admirable copies of costly

drawings in black and white may be obtained for a trifling cost. Such are the processes of heliogravure and photogravure, and the like, which are well adapted for the reproduction of such works as the beautiful but costly woodcuts of Albert Dürer. They thus enable a man of very ordinary means, but who is at the same time a lover of Dürer's art, to obtain excellent copies from fine impressions at a very moderate price. So close are they to the originals that M. Durand puts a special trade-mark on the back of the print to prevent the frauds that might naturally arise. For all artistic effect these copies are much superior to ordinary but costly impressions from a worn-out block, such as are generally in the market.

From many causes, to which it is unnecessary now to refer, the art of line-engraving has long ago passed its best, and it seems likely to die away after the present generation of old engravers is gone. Hence we must be careful in our selection of modern line-engraving, which is generally tame mechanical work, dexterous enough in its way, but without spirit or spark of genius. It must be allowed, however, that some of the mezzotint engravers of the present day have done excellent work, though it cannot be said that they come up to the splendour of the great men of Sir Joshua's day. For line-engravings, if we can afford the price of fair examples, we must turn to the great old masters of Italy, France, Germany, and England, and, luckily for us, the number of these is so large that we may acquire, at a moderate cost, fair impressions of our favourite style and subject. Those that are absolutely beyond our reach are the rare impressions from the plate in certain states. These are indispensable to a museum, and are hunted after by collectors, not always from a love of art, but from the desire to possess what other people cannot have. Frequently these rarities have no special value from an artistic point of view, so that the eager pursuit of them does not necessarily imply any special love for the beautiful. Mr. Hamerton has well distinguished between the collector and the amateur,—the one searching after the *rare*, while the other seeks the *beautiful*, and Dr. Willshire and Mr. Seymour Haden have both insisted strongly on this point in reference to the etchings of Rembrandt and other great masters. With buyers of moderate means, as indeed with all, the supreme test must always be excellence and brilliancy of impression. Judgment and caution must be rigorously exercised against forgeries and worked-up plates, and in all cases feeble and worn-out prints must be carefully avoided.

Of etchings by the great masters it is needless to speak here, as they are now-a-days beyond our reach. But if we wish to see how Rembrandt worked on copper either in portraiture, Bible subjects, or in landscape, if we are anxious to learn by what simple means he accomplished great results, and if we wish to study the mind of this great master of expression, even a shilling photograph of any of his etchings will not be without its value.

It is fortunate for us, however, that the art of etching has been revived with great vigour in our own time, and that we can avail ourselves of the works of excellent artists at a very moderate cost. The art is too abstract to be popular, the work being suggestive rather than imitative, interpretive rather than realistic. Still it requires but little education to appreciate the freedom and decision of a great etcher. He works by his needle on a copper plate, and every line he draws is there once and for ever, subject only to slight modification. He must know what is essential to the carrying out of his idea, and what he may leave out as of little importance. Hence there must be decision and firmness as well as ease and spirit. The limitations of his art must tell him when to hold his hand. All this has been explained with great fulness by Mr. Hamerton in his delightful book on "Etchers and Etching," and we in this country owe to the same writer our first acquaintance with the great movement in this art which began in France about twenty-five years ago. We have admirable etchers in this country, such as Cruikshank, Seymour Haden, and Whistler, but the first of these is chiefly regarded by us as a caricaturist, and we have been apt to overlook his wonderful skill in the use of the etching-needle. His book illustrations are very numerous, as his industry has been unwearied. Of those in Grimm's "German Stories," Mr. Ruskin says that "they are the finest things, next to Rembrandt's, that have been done since etching was invented." The public have gradually been coming to see the beauty of an art which gives us the work of the master directly from his own hand, without the intervention of any engraver, and our English artists are beginning to use the needle in greater numbers, though it cannot be said that hitherto they have applied themselves to copper, as they have, with such marked success, to the wood-block. It is to France that we owe the revival of the art. For many years the French Society of Aquafortists published every month a portfolio of five etchings for an annual contribution of fifty shillings. Of the sixty that appeared every year many were worthless, some were fair, and a few excellent; but these last were worth more than the amount of subscription. The names of Daubigny, Jacquemart, Legros, Lalanne, Appian, Jacque, and many more, have since become famous. Méryon and Millet might have been attainable for moderate sums within a few years back, but these men are dead, and their work, at one time neglected, is now much sought after. But the number of clever etchers is daily increasing, and in the "Gazette des Beaux-Arts," "L'Art," and our own "Portfolio," we frequently have etchings that are worth much more than the cost of the part. The impressions are carefully printed, but if finer prints on better paper are desired, they can be had from the publishers at an extra cost of some shillings.

Besides being an admirable means of expressing the original conceptions of the artist in a purely artistic manner, etching is rapidly taking the place of line engraving as an excellent method of translating pictures into black and white. One great advantage it has, in giving us the impression of the picture as it appears to the eye and mind of the accomplished etcher. In this branch of art we owe almost everything to the foreign schools, the names of Rajon, Flameng, Unge, and Lalauze being the most prominent.

But even if the moderate cost of these etchings is too much for our limited income, our aim is not yet hopeless. The art of engraving on wood is as genuine as that on metal; it has its own excellences and its own limitations, both arising from the nature of the wood-block. It is obviously impossible to cut on wood with the same delicacy as on steel or copper, as its texture would not stand such work, and the difficulty is increased when we remember that the dark lines of an etching or of an engraving on metal are produced by incisions or cuts into the plate. In a wood engraving, on the other hand, the lines are produced by the ridges or projecting surface of the block, from which the parts that are intended to give whites in the print have been cut away. Hence in true genuine wood-cutting there should be no attempt to rival the refinements of the engraving on metal; but, in lieu of these, we have a vigour of effect rarely reached in the other art. It is true that the cutting is seldom done by the hands of the designer; for the best authorities hold that even Dürer and Holbein did not cut their own blocks; but, still, in the best work there is always perfect harmony between the designer and the wood-cutter, so that little, if any, of the spirit of the artist is lost. We have had, however, in our own country one great engraver on wood, who also drew for himself on the block,—our own "matchless, incomparable" Bewick. It is to this untrained artist that we owe the revival of the art in the end of last century. Bred to the trade of a goldsmith (one of the best of schools), he instinctively felt that wood must be treated as wood, and accordingly he availed himself of the simplest methods of work, his effects being produced by single lines and by masses of black, slightly intersected or broken with white. His great book on the British birds has never been surpassed for truly refined work, and it has this rare advantage, that it is almost entirely his own, both in drawing and cutting. A simple man and an intense lover of nature, he bestowed all his heart on the work he had undertaken, while the tail-pieces show him to have been a man of genuine humour and pathos. Living among rough people, his humour is sometimes broad and contrary to our ideas of delicacy, but no coarse conception ever entered Bewick's mind. After his death in 1828, the art was continued by his pupils, Clennell, Nisbet, and other able engravers, the fishes of John Thompson being worthy of being compared with the birds of Bewick. Our English school was so famous in those days that French publishers used to send work to be executed in this country for their best illustrated books. After drifting into more or less of an imitation of line-engraving, the art became again simpler, and of this new style the work of W. J. Linton is, perhaps, the most original. Excellent examples of his work are to be found in the illustrations to "Romola," from drawings by Mr. Leighton. Fine impressions of these were published in "The Cornhill Gallery" of 1862, a portfolio containing thirty woodcuts after Millais, twenty-seven by Trighton, and as many by Fred. Walker, with some by Du Maurier, making up the number to 100, all cut by Linton, Swain, and Dalziel Brothers, and costing only one guinea, so that these wonderful prints were sold for little more than 2d. each. Pinwell, Walker, Houghton, and Hughes have also done beautiful drawings for volumes and portfolios, published by Routledge & Sons, the wood-cutting being executed by Dalziel Brothers. They are perfect *fac similes* of the work of the artists, and each cost about 2d., so that for a couple of pounds almost a gallery of fine drawings, after our most eminent painters, could be obtained.

The establishment of the *Illustrated London News*, of *Once a Week*, and of *Punch*, undoubtedly did much to advance the art; the names of Sir John Gilbert, George Thomas, and Birket Foster readily occurring among those that have helped to raise it to a higher level in point of design. When we take up *Punch* for a few moments' amusement, we are apt to overlook the extraordinary artistic treat that has been provided for us by Tenniel, Leech, Du Maurier, and Keene. The original drawings by these men when they come into the market bring high prices, and yet the ordinary impressions, which we have for a fraction of threepence, are by the skill of the engraver nearly as fine for all artistic purposes, barring any imperfections that may arise from hasty cutting.

It is, however, to the *Graphic* that we owe the greatest development of the art in our country. Its managers have the courage to pay for their drawings sums that would formerly have been thought good prices for oil-paintings, sixty guineas being no uncommon price for a single drawing. They have thus gathered round them some of the best painters of the day, for Herkomer, Pinwell, Fildes, Small, Gregory, Miss Thompson, and many more, have all supplied them with drawings. The result has been very favourable to the development of these artists when they have taken to oil-painting, and we see the good results of the school in which they were trained in a more consummate knowledge of the human figure and a more perfect command of expression than is common in our English school. And not only may we get for a merely nominal sum excellent examples of the work of our English painters, but in the best illustrated papers we find translations of pictures by foreign artists, interpreted by the broader and more suggestive style of wood-cutting, as practised by Pannemaker and Pisan, Froment, and Uhlrich. Even in papers costing no more than a penny, we frequently find cuts that are worth preserving. Still better results may be looked for in the future, for Mr. Roberts, one of the best engravers for the *Graphic*, is at present conducting at South Kensington a class for woodcutting, composed of well-trained draughtsmen and draughtswomen.

Before concluding this already too long paper, I shall pass at once to another art that is again reviving, after a long period of decay,—one of the oldest of the arts,—pottery. The desire to make beautiful the common ware of everyday use is as old as our race; nations and peoples have stamped on it their individuality. Few of the South Kensington collections have been more interesting than that of the ware in common use in different countries, which was exhibited a few years ago. In the midst of much that is bad among us, from its machine-made tameness or vulgar ornament, a factory has sprung up within the past few years that is turning out at moderate cost work that is already finding its way into national museums. I refer to the Lambeth ware of Messrs. Doulton. It cannot be called a revival of the old Grès de Flandres, because it is thoroughly original, though inspired by the manner of the old Rhenish workers. The principles on which the factory is conducted deserve to be known, as they are so completely in accordance with those that have produced good art in all ages. While the artists study the best examples of the best schools, they imitate none, trying rather to work in the spirit of the original than to copy. No duplicates are produced; when the piece is finished, it is not repeated, but new designs are taken and new experiments made, so that the skill of the workman is always creative.

And last, but not least important, full credit is given to the work of each designer, his or her monogram being stamped on the piece, thus encouraging the individuality of the artists. These are educated at the Lambeth School of Art, a very modest institution founded in 1854 by Canon Gregory, in which drawing from the life, without which there can be no good modelling, is specially studied.

Factories having a similar object in view are at work in other countries, their aim being to produce good form and colour at a low price, as, for example, in the soft ornamental pottery of Vallauris, near Cannes, and the more rude but effective cheap pottery of Alsace, which is intended for domestic use, such as jugs, basins for milk, &c. I refer to these merely because I have been able to lay before you examples of their ware.

In all the illustrations I have given to-day, art is to be measured, not by money value, but by its own standard. Rarity, fashion, love of supposed good investment, are apt to lead us astray, while mere "prettiness" is a dangerous test. The liking of to-day may be displaced by the dislike or indifference of to-morrow. Real admiration and love must rest on something more permanent than a passing whim. We must remember also that neatness of execution, which comes from the working of a machine, is less valuable than what may appear the ruder work of human hands. Tame regularity is dearly bought at the cost of the spirit that a good honest workman is able to put into his labour, in which we should be able to trace his motive and his skill.

A house, or even a room, furnished and enriched on the principles I have tried to advocate, is pretty sure to be beautiful even in spite of mistakes, and it is certain to be characteristic and free from common-place. The humblest artisan will find that it is not beyond his reach to surround himself with beautiful things, the collecting and the care of which, as in the mounting and framing of his etchings and woodcuts, would be a constant source of pleasure, and a means of giving him a higher education. It was to workers of all classes that Mr. Huxley says truly, in one of his "Lay Sermons," lamenting the want of a wider and higher training, "You will have to weary your soul with work, and many a time eat your bread in sorrow and in bitterness, and you shall not have learned to take refuge in the great source of pleasure without alloy, the serene resting-place for worn-out human nature—the World of Art."

A NEW "TEMPLE" IN PARIS.

A FEW days since was inaugurated in the Rue Buffault the temple built by the Israelites of Paris who belong to the rite called the *Portuguese* or *Hispano-Portuguese*, the ordinary rite being improperly termed the German. The followers of the rite for the observance of which this new temple has been erected are descendants of those Jews so cruelly and wantonly driven from Spain at the close of the fifteenth century, by the order of their Catholic Majesties, Ferdinand and Isabella, and this Spanish origin is plainly discernible in the character of the religious ceremony, much more gorgeous and pompous than with the followers of the German rite.

In spite of the difficulties which have been met with in the ground on which the new temple has been built, the works have been ably terminated with in the short period of a year, thanks to the activity and zeal of M. Ferrand, the architect, seconded by M. Tabanon, his contractor. The style chosen by M. Ferrand is the Romanesque of the second period of the twelfth century.

The upper portion of the façade, which is elegantly flanked by two pavilions, is formed by two great arches supporting a pediment crowned by the Tables of the Law. The two principal pilasters to right and left are surmounted by pyramids. The centre is occupied by a large rose of great lightness. Between the two arches are placed twelve *œils de bœuf*, and round these runs the Hebrew inscription, "Be blest in entering and blessed in issuing." Three principal doors lead to the porch, then to the vestibule, and, finally, to the interior; this is composed of a nave and side aisles, with galleries (for the ladies), supported by six marble columns united by means of arches. The key of the vault of each of these arches is in the form of the Tables of the Law. The ladies' tribune is also raised on bays separated by columns; the balustrade is in carved stonework, the design recalling, as everywhere, the form of the Tables of the Law, and repeating constantly the six-pointed star, the traditional Israelitish ornament. The whole is terminated by a full vault pierced with four *œils de bœuf*. The lustres placed in the bays of each story are in the form of the traditional seven-branched candlestick. The tribune in which the officiating minister and the choir find place is situated in the midst of the nave, and lighted by six candelabra and an eight-branched candlestick. The tabernacle, in which are deposited the five sacred books of Moses, is reached by seven broad steps, the balustrade of which is richly carved; in the foreground is an arch the exact repetition of that of the façade; upon the dark background stands out a marble framing supported by columns and pilasters; from the lintel descends a magnificent curtain of crimson velvet, which permits one to see, lower, the true tabernacle in carved wood relieving on a blue firmament. Above, the Tables of the Law stand out in the midst of clouds and rays, allowing the light to pass through innumerable pieces of coloured glass. Above the entry to the temple is the organ-loft, formed of a large arch, supported by two columns, whose capitals are richly sculptured. Between this arch and the vault are the words, "Thou shalt love thy neighbour as thyself." The loft is lighted by the rose-window we have already referred to, and which is surrounded by these holy words, "Hark, Israel! the Eternal, our God, the Eternal is one." The whole building, undoubtedly does great honour to M. Stanilas Ferrand, the architect, whose plans have been carried out by M. Leroy, to whom are due especially the disposition of the details, the happy choice of the ornament, &c. The sculpture is the work of M. Bloche, an Israelite artist. The expenses of the whole, which amount to more than 24,000*l.*, have been paid, a third by M. Osiris Ifla, the rest by the members of the Israelite community. On Monday, the 3rd inst., the temple was solemnly inaugurated with all the pomp usual to the Spanish rite.

NEW BUILDINGS IN VIENNA.

THE TOWN-HALL.

WE have had occasion to illustrate the progress of architecture in the capital of the Austrian empire, the selection from among its new buildings being almost inexhaustible. In our present number we give a view of the new Town-hall, which occupies a position between the University and the Houses of Parliament, both also new erections. The illustration is taken from a drawing forming part of the Album presented by the city of Vienna to the Grand Duchess Gisela at her marriage.

The construction of a new Town-hall had been long planned, and the project had to undergo many changes before its execution was finally resolved upon. The growth of Vienna had made it apparent that the old Rathhaus, situate in the Wipplinger Strasse, and dating from the fourteenth century, although repeatedly altered and enlarged, was too small at a time even when no one had the remotest idea of the enormous increase of the city, both in size and number of inhabitants, that would occur. This growth has taken place within the last quarter of a century; and in the plans for enlarging the city provision was made for a new Town-hall. Twice had sites been fixed upon, and twice they had to be abandoned because they were not large enough for the yearly increasing requirements; the principle having been originally laid down that every branch of the municipality should be united under one roof. It need not be explained how great the difficulties were that in consequence presented themselves to the architect; waste of space for lobbies, staircases, courts, &c., was unavoidable; and even the richest fancy of the artist and a style of architecture permitting of the greatest variation cannot prevent the monotony of long fronts.

The international competition invited in 1868 resulted in eighty-five designs being sent in from Austria, France, Germany, and Italy. Eight of them received prizes, three of them first prizes: those of Friedrich Schmidt, of Vienna; Baudry, of Paris; and Chandon & Lambert, of Paris. The first-named architect was selected to carry out his design.

Friedrich Schmidt, looked upon in Germany as the first master of Gothic architecture of our age, was born in 1825, in the village of Frickenhofen, in the Jaxt district of the kingdom of Würtemberg. He received his technical training in the Polytechnikum of Stuttgart, and was afterwards apprenticed as a mason to Zwirner, of Cologne. In 1848 he was made a master stone-mason (*Steinmetzmeister*), and eight years later passed his examinations as architect (*Baumeister*). In 1857 he was appointed Professor at the Academy of Milan, and, Lombardy being ceded to Italy, transferred in like capacity to the Academy of Vienna. After the death of Leopold Ernst, he was called to fill the latter's post of architect of the cathedral (*Dombaumeister*). At present Herr Schmidt is also Rector of the Vienna Academy of Arts. His works are extremely numerous. Besides the restoration of St. Stephen's (including the partial rebuilding of the tower), which he brought to its completion, he is the architect of most of the new churches of Vienna, such as the Church of the Lazarists, St. Margarethe, Brigittenau, and Fünfhausen. The plans for restoring the castles of Vajda Hunyad in Transylvania and Karlstein in Bohemia are also by him.

The Vienna Rathhaus, which was commenced as early as 1872, forms a parallelogram 505 ft. long and 407 ft. broad, and occupies an area of 205,535 square feet (nearly five acres). The space inclosed by the four façades is divided by two larger and four smaller blocks into seven courts, of which the inner one extends in a length of 260 ft. and a breadth of 115 ft. throughout the entire depth of the interior space, while both to the right and left are placed three courts of various sizes. The style of the building is Gothic, with a leaning towards that development which Gothic architecture presents in Upper Italy. All the blocks have five stories, ground-floor, raised ground-floor, entresol, principal story, upper story; in the principal façade the two ground stories are combined into one by an arcade. The distribution of the disposable space is such that in the lower stories are located the various offices most used by the public, while the principal floor contains the banqueting and other public halls, with refreshment-rooms, as well as the meeting-halls of the town council and the executive. The upper story is occupied by the museum of arms of the city, the archives, &c. The principal staircases are in the centre blocks.

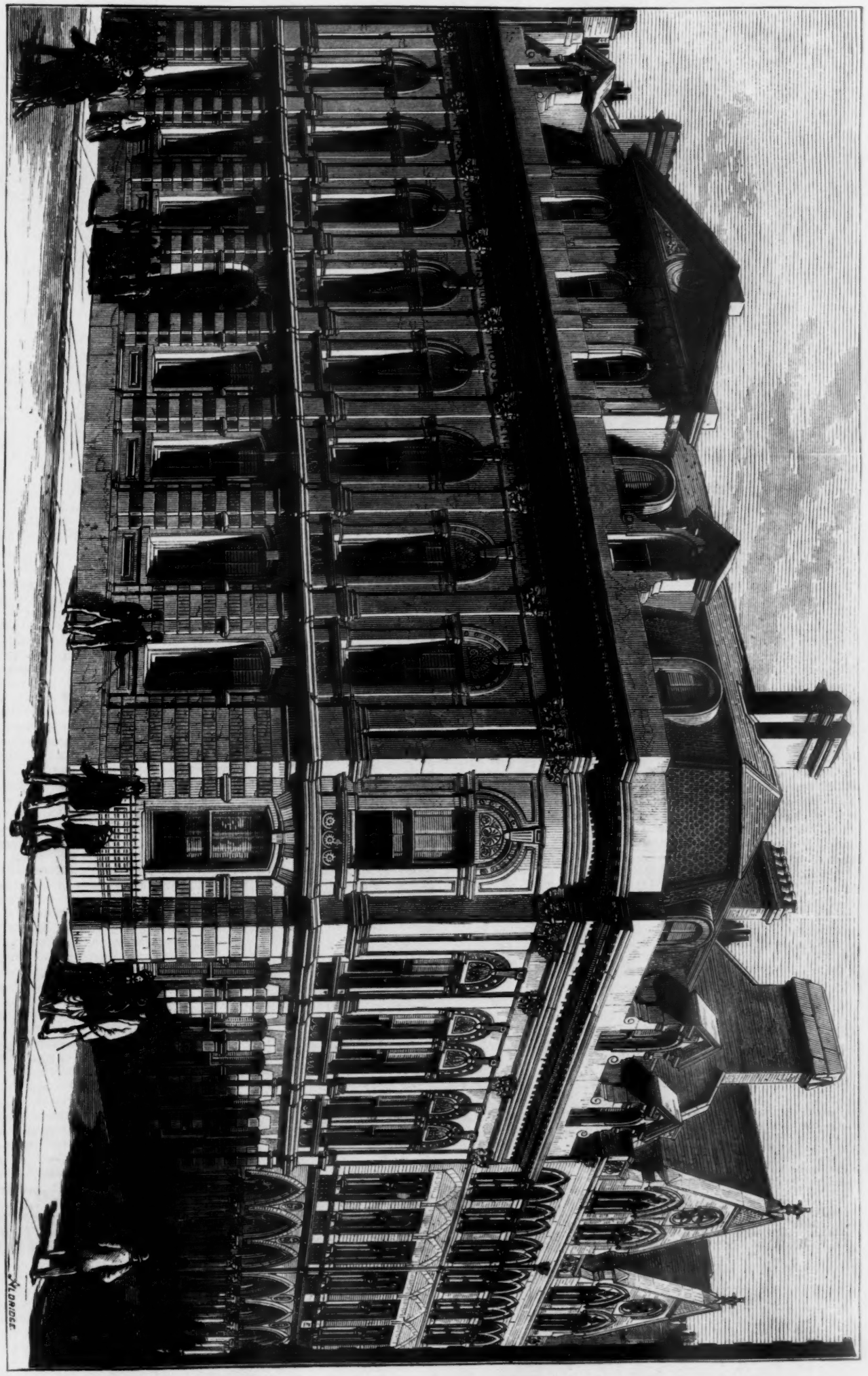
The centre of the building projects from the front by a second row of arcades, and is raised upon a flight of fourteen steps. The tower, 351 ft. high, juts out further from the middle part. Passing through the arcades, a vaulted hall of 112 ft. long and 36 ft. wide is entered. Remarkable for their size are also the banqueting-hall, of an area of 11,645 square feet, and 44 ft. high, with an open loggia along its whole length, and a smaller room in the tower; and the great meeting-hall of the town council, of an area of 3,714 square feet, extending through two stories, with galleries on three sides.

All the outside façades are erected in freestone, those of the courts, from the entresol upwards, in brick with terra-cotta ornaments. All the roofs and ceilings, with the exception of those of the halls and corridors, which are spanned by groined vaulting, are of iron.

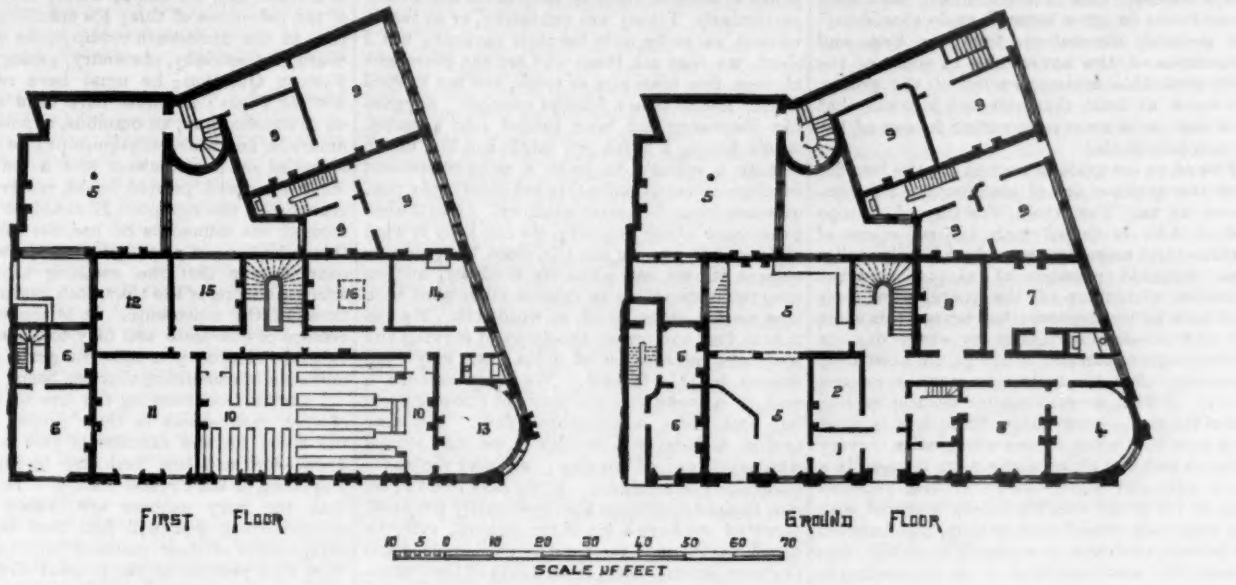
It is estimated that it will take till 1882 to complete the new building; the calculated cost being eight and a half million florins (850,000*l.*).

Japanese Competition with England.—The *Birmingham Post* publishes an extract from a letter received by a large manufacturing house in Birmingham from its agent in Japan. The writer says:—"The Japanese are now making a number of articles which I formerly purchased from you, and at prices beyond the possibility of European competition. In fact, quite a number of different classes of merchandise are being made in this country, and Europeans are obliged to discontinue importing in consequence. This may appear somewhat strange to you; nevertheless, it is a fact. Bear in mind, Asiatics live as no other races can, and upon food which would not sustain a European house-dog. Frugal as badgers, industrious as bees, they undersell every labour market which they enter, and outdo every civilised artisan at his own trade. Any one who sees a Japanese carpenter at work, with his toes for a vice, and his thighs and stomach for a bench, has seen tools well used, and goods equal to European turned out. They will, in fact, become formidable rivals of all kinds of Western manufactures. The Japanese are always ready to learn, and to outvie everything that the West does, and this they do with less food, less air, less clothing, and less comfort than any civilised workman."

THE NEW TOWN-HALL, VIENNA.—HERR FRIEDRICH SCHMIDT, ARCHITECT.



THE LONDON MISSION HOUSE, NEW BROAD STREET.—MR. E. C. ROBINS, ARCHITECT.



Scale, 30 ft. to the inch.

1. Porter.
2. Waiting-room.
3. General office.
4. Home secretary.
5. Warehouse.
6. House adjoining.
7. Accountant's office.
8. Store-room.
9. Office. 10. Board-room.
11. Committee-room.
12. Tea-room.
13. Foreign secretary.
14. Foreign clerks' office.
15. Travelling secretary.
16. Lavatory.

THE LONDON MISSION HOUSE, NEW BROAD STREET.—*Plans.*

THE LONDON MISSION HOUSE.

SOME forty years ago the London Missionary Society instructed the late Sir William Tite to prepare plans for the offices of the Society, upon an irregular site, at the corner of Blomfield-street and New Broad-street. Accordingly, a rectangular block of buildings was erected by him, with an Italian façade towards Blomfield-street.

The surplus land was enclosed with railings, a museum was placed in the midst of the back land, and offices for the Peace Society were afterwards added at the south-east corner, with a front towards New Broad-street.

This accommodation becoming too limited for the growing importance of the Society's operations, it was recently determined to increase it, and at the same time to utilise the vacant portions of the site by the erection of office buildings.

By the advice of its present architect, Mr. E. C. Robins, energetically supported by Mr. G. F. White, it was eventually determined to clear the site of the existing buildings, excepting the main block facing Blomfield-street, which it was decided to raise by an additional story, and to extend southwards to the boundary of the site. This decision, involving the removal of the old museum building, and the premises occupied by the Peace Society, the former was transferred to the upper floor of the main building, and the latter was accommodated in the new offices proposed to be built. It was further agreed that the main building, or Mission House proper, should be designed in a similar style to that employed by Sir William Tite, but that the office buildings should be made distinct by the adoption of a different style.

The perspective view which we give exhibits the southern and western façades of the combined buildings as designed and executed, except so far as questions of "light and air" (which subsequently arose, and ended adversely to the Society), prevented their being fully carried out. Thus the upper story of the office buildings had to be set back, and the gables omitted.

The plans of the ground and first floor of the completed buildings, appended, will sufficiently explain the additions and improvements made, which have cost upwards of 12,000*l.*

Mr. Brass was the builder, and Mr. Woodley the clerk of works. The fittings of the Board-room were executed by Messrs. Collinson & Lock.

The very interesting museum, accumulated during a long course of years by the agents of the Society in all lands, is unique of its kind, and has been carefully arranged in the new cases provided for it, under the direction of the versatile foreign secretary, Dr. Mullens.

The Blue Bricks, used in the New Dock in the Thames, recently described by us, were supplied by Mr. Hamblet, of West Bromwich.

ANCIENT BUILDINGS:

WHAT PRINCIPLES SHOULD GOVERN THEIR RESTORATION OR THEIR PRESERVATION AS MEMORIALS?*

MOST ancient buildings are common property; it is, therefore, useful for us to know its value, the extent of our rights in it, whether it can be improved, and by what acts or neglect of ours it can be deteriorated or destroyed.

When I say that ancient buildings are common property, I use the words in a double sense. They are not only open books on a grand scale which force their lessons on us, and are our property in the sense in which Emerson speaks of a landscape,—"The fields may be farmer Hodge's, but the landscape belongs to him who can appreciate it"; but they very generally are common property in the sense that the public have common rights in them. Many of our ancient buildings are public buildings, and are exempt from taxation. Many we are taxed to keep up, and the mansions of the great are not taxed upon the interest of their cost, but upon their letting value (a mere trifle), it being considered that their magnificence is a public benefit.

Let us consider, first, the value of ancient buildings:—

The plainest are storehouses of many arts and sciences. If properly studied they tell us what foundations, what materials, what cements, what methods of construction, will resist those constant forces of nature that will eventually level them with the dust. There is not a crumbling stone that is not fraught with instruction, even if it be only the evidence of the stone's unfitness for its place. And that you should not think these advantages frivolous, I may tell you that the present Building Act of London, in fixing the ratio of thickness to height in a wall, has been guided by a wall now standing, and built 1,800 years ago, at Tivoli, for the Emperor Hadrian. As far as the art of construction is concerned, the buildings of the thirteenth century, and in fact of the whole Gothic period, have never been surpassed in invention, daring, and subtlety, even if they have been equalled by the engineering triumphs of our own day. But in addition to the science and handicraft, there is generally enshrined in ancient buildings the fine arts of architecture, carving, and sculpture, and occasionally that of painting, and as the science exercises our intellect, so does the fine art excite our emotion.

Besides these abstractions, I may say that another spirit animated the handicraftsmen of Mediæval times. What we call art pervaded every craft as electricity does the air. I do not suppose that every craftsman was an original designer; on the contrary, I suppose this gift was confined to very few, and these usually became the masters; but probably every man knew by rote a certain number of stock patterns and stock shapes; probably the pure designer, who is no handicraftsman, and the pure workman who is no artist, but makes things "without form and void," did not exist. Every craftsman learnt more or less to draw or to model, and there being but one form of ornament in fashion at each particular time and place, the mousetrap man ornamented his trap as well as made it; the master mason carved the stone image as well as cut the stone; the master carpenter carved* the wooden image as well as the timber; the master tile-maker designed the tiles as well as made them; the master mosaic-worker found the design as well as put up the work; and this conjunction of artistic and mechanical skill in the same person only died out gradually. In Scotland, at least, it existed in the middle of the last century. The carpenter's apprentice there carved a chest as his masterpiece (the marriage-chest in which the bride brought to her husband those clothes the thread for which had earned her the name of spinster). The old plumbers' shops of London that I recollect in my childhood were adorned with the masterpieces of their master or their former master—ornamental cistern-fronts, leaden vases, and leaden statues.

The nobler buildings, and particularly the more important cathedrals and churches, are, like the Talmud, collections of the arts and sciences, the laws and history, the pathos and humour, of many centuries. Many cathedrals are enriched with sculpture or mosaic, not only representing Scripture history from the Creation to the end of the New Testament, and scenes from the lives of the saints and martyrs, but Old-

* By Mr. George Aitchison. Read at the Aberdeen Social Science Congress.

* From the Old Testament:—Isaiah xliv. 10, "Who hath formed a god, or molten a graven image that is profitable for nothing?" Verse 12: "The smith with the tongs both worketh in the coals and fashioneth it with hammers, and worketh it with the strength of his arms." Verse 13: "The carpenter stretcheth out his rule; he marketh it out with a line; he fitteth it with planes, and he marketh it out with the compass, and maketh it after the figure of a man, according to the beauty of a man."

From "Thousand and One Nights":—"The old woman answered when she understood the affair, "Know, O my mistress, that the return of the Khaleefeh is near; *but I will send to a carpenter and desire him to make a wooden image of a corpse*, and they shall dig for it a grave," &c.—"*Ghanim the Distracted Slave of Love*," Lane's translation.

"On the morrow, the Weseer caused a whitewasher to be brought, and a painter, and an excellent goldsmith; and having provided them with all the implements that they required, introduced them into the garden, and ordered them to whitewash that pavilion, and to decorate it with various kinds of paintings; after which he gave orders to bring the gold, and the ultramarine pigment, and said to the painter, 'Delineate at the upper end of this saloon the figure of a fowler as though he had set his snare, and a female pigeon had fallen into it, and had become entangled in it by her bill.'"—*Taj-el Melook and the Lady Dunija*," Lane's translation.

World stories, "the Anthropophagi, and men whose heads do grow beneath their shoulders," and probably illustrations from the lives and caricatures of the adventures of some of the most noticeable contemporaries of the artists. We know at least that the very bullocks that drew the stone were represented in one of the French cathedrals.

Few of us are grateful enough for the benefits that the sublime art of architecture has conferred on us. The whole literature of Europe and of Asia is tinged with the reflections of architectural magnificence, and we hardly realise what splendid passages of eloquence, what deathless metaphors of the poets, owe their existence to architecture; but beyond this there are new sciences springing up every day, to whose progress ancient buildings are absolutely necessary. We are trying to make a natural history of man, to construct a science of life, and of the soul,—every chipped flint or sharpened bone man used when he was a troglodite,—every polished celt and bit of wickerwork he used in a more advanced state,—every broken potsherd that he had pitted with his fingers or scored with his nails,—is seized with avidity, and hoarded by private students, or exposed in public museums. To some minds it is as interesting to elucidate the thoughts of more civilised man from his works, as to rake in a midden mound; but the monograph of each student will eventually be woven into a perfect piece, that will represent man from his earliest to his latest development. There is a comparative architecture, comparative sculpture, comparative costume, as well as comparative anatomy, and none can tell what help may be given to history, to folklore, to philology, to the mysterious traces of race,* to a thousand future sciences that at present we do not even dream of, by the preservation of ancient buildings, ancient carving, and ancient sculpture, but it is necessary that these records should not be tampered with.

At any rate, we should regard all architecture in the same light as Dr. Deutsch did all literature. "We look upon all literature, religious, legal, and otherwise, whensoever and wheresoever produced, as part and parcel of humanity. We in a manner feel a kind of responsibility for it. We seek to understand the phase of culture which begot these items of our inheritance, the spirit that moves upon their face. And while we bury that which is dead in them, we rejoice in that which lives in them. We enrich our stores of knowledge from them, we are stirred by their poetry, we are moved to high and holy thoughts when they touch the Divine chord in hearts."

Having pointed out some of the advantages which ancient buildings offer us, the next point is to consider their restoration or preservation; as far as the latter is concerned, I should unhesitatingly say preserve as many as you can, and where there is only a chance of preserving one out of many, preserve the best, but in the case of choice you want to consult many experts,—at least a painter, an architect, and an antiquary, and the architect must be one who appreciates as well as understands the work of the age or ages to which the buildings belong.

I have often been tempted to ask myself whether Englishmen of the present day are the most superb or the most insensible of mankind. I see the houses of the poets and philosophers, the houses of Thompson, of Pope, of Milton, and of Newton, the stately mansions and the churches of Wren that gave character to London, pulled down without a protest, to make way for a pot-house or a usurer's parlour. I wonder whether it is through the belief in a more splendid destiny: "England has many a worthier son than he," or whether it is through that crass ignorance and brutality which make men like the "beasts that perish." Be that as it may, many a fine old church or mansion might be saved by using it as a museum, a library, a warehouse, a cab shelter, or a stable. In France how many churches have been preserved by being turned into storehouses or markets!

Although the principles that should govern the treatment of our property are the same, yet the application of them is sometimes rendered difficult by circumstances. Our property consists of cathedrals, churches, castles, and hospitals; of town-halls and monuments; of colleges, conventual buildings, and mansions; of granges, cottages, and barns. We can hardly ask the occupants of some of these to keep them untouched, particularly if they are unhealthy, or so inconvenient as to be unfit for their purpose; but I think we may ask those who are the possessors of very fine examples to spare, and not to spoil them. Let us take a fanciful example. Suppose the Parthenon had been turned into a gentleman's house, I think we might ask him not to remove a column, to make a more convenient carriage-entrance, and not to cut holes in the panathenaic frieze for garret windows. As to the improvement of our property, we can keep it wind and water tight; we can tile, slate, lead, zinc, or cement it; we can glaze its windows; and we may reinstate rotten or ruinous plain-work with new marble, stone, brick, or woodwork. We can put in ties, and arrest the decay of carving and sculpture by solution of silica; we may even restore in this fashion. We may remove a wall or a partition; we may cut down plastering that hides a sculptured face. We may unstop a door or a window; we may scrape whitewash out of carving; we may replace a plain shaft of a column. If we care to do it, we may replace mouldings that have partly perished, provided we have a bit of the original, with the chisel-marks upon it; we may even replace lost features where there is no doubt of their absolute similarity to those which remain. We may restore a battlement, a buttress, a window, a piece of panelling, but we can never replace sculpture, carving, or a lost feature, except in the case of our being absolutely certain that it was an exact repetition of that which remains.

I say we may restore these things if we care to do so; for the very lichens, weather stains, and markings of Time's finger, give a venerable hoariness to old buildings which our new patching must necessarily spoil. The look of newness unfits a building for the painter, and robs it of that poetic tinge that great antiquity bestows. How can we deteriorate or destroy? We can rework mouldings; we can scrape carving or retouch sculpture; we can sometimes spoil the whole design by a little addition or by the alteration of a feature; and we can replace all the features, and all the carving and sculpture, with nineteenth-century work in imitation of old, and the nearer we can imitate the original work the greater is our misdoing, as that bad money is the worst that most readily resembles the good.

The architectural tinkers and tailors have less to answer for than the highly-skilled Mediævalists of the present day; the work of the former has a kind of twang about it that could mystify no good archæologist, but he might be hopelessly confused or misled by the latter. Twenty years ago young hobnailed masons by the legion were employed in cutting out the decayed or decaying sculpture of Rouen Cathedral, and if the one I spoke to was to be believed he was introducing his own designs. Had these been fine and original sculpture we might have set the gain against the loss. Had he even represented the "Apostles in their swallow-tailed coats" future ages might have admired the beauty of our dress; but what present or future beholder could get either pleasure or profit from the imitation work of a botcher? Most of us have seen dozens of churches from which every flavour of antiquity has evaporated under the hands of the restorer, and at a greater cost, too, than would have built a new church and left the old one a beautiful ruin. I once saw a little sea-side church the body of which had been hopelessly ruined; the tower towards the sea was of most picturesque outline, with sloping buttresses yards wide at the bottom; a cresset tower at one angle rising above the square-topped tower, the face of which was almost plain, with mere pigeon-holes for light, and the small double belfry window nestled up under a narrow string-course below the battlements; the restorer had put a great circular cusped window in its middle, making it look like a man with a set of grinning teeth in his stomach.

I have pointed out to you the value that old art has now, and what it may have for the future, and I will now point out how impossible it is to reproduce it. If any one has the misfortune to lose a leg or an eye, he can have it restored by a wooden leg or a glass eye; but were surgeons like architectural restorers they would persuade him to have two wooden legs or two glass eyes, for the sake of uniformity.

Whatever talent a man may have, however severely he may have studied, however he may have twisted his mind into a Mediæval attitude, he must remain a nineteenth-century man; he can neither give himself the influence and surroundings of another age, nor can he wholly divest himself of the influences of this; his schooling has been that of the nineteenth century; he must have heard of electricity, chemistry, geology, and the Eastern Question; he must have read *Punch* and the *Times*; he must have seen a rifle and an Armstrong gun, an omnibus, a policeman, an umbrella, and a meerschaum-pipe; he must have travelled on a steamboat and a railroad; he must have read printed books, received a telegram and a photograph. It would be tedious to recount the influences he has not felt, and the things he has not seen, but your knowledge will convince you that the seething thoughts and stirring actions of the thirteenth century are not those of the nineteenth. It is the very quintessence of bad taste and folly to destroy the invaluable records you have to get a colourable imitation of something that has been.

I am far from denying the use or the charm of such restorations in their proper place, but the fields for the exercise of this antiquarian knowledge, and this restoring talent, are the playhouse or the Crystal Palace. To show you that the very authors are aware of their anachronisms, you will find that the interior perspectives of their restored buildings are not filled with persons of the present day, but with mailed knights, wimpled ladies, ragged villains, sturdy yeomen, stout burgesses, and cowled monks. There are other evils, too, which this so-called restoration entails. Almost every ancient building that is still used for its original purpose is a museum of successive phases of art. You may see, for instance, in one church a Norman nave, a thirteenth-century aisle, a Tudor chancel, an Elizabethan pulpit, an altar of "neat Ionick work," pews with the tops carved by Grinling Gibbons, and scrolled ironwork of the seventeenth century, a font and monuments after the style of Roubiliac. If you put this into the hands of a thirteenth-century restorer, he will restore all the subsequent work off the face of the earth, and you will get a brand new nineteenth-century thirteenth-century church.

In any other century but this, if you wanted your church enlarged, restored, and beautified, it would have been done in this wise,—the main features would have been kept, and the architect, the carver, and the sculptor would have given their best work, and of their time too, to the new, and you would have found, had you lived in that century, that this new work was more appropriate and more beautiful than the old.

You will probably ask why you cannot get the same thing now. The reason is simple. You do not want it. There is nothing beautiful that any of you really care for. You can get, however, real nineteenth-century architecture if you go rightly about it. Go to an engineer: tell him what you want altered and what enlarged; tell him you do not care what you spend to make the place convenient, solid, and lasting, but that you will not lay out a shilling on ornament, as you would tell him if he were building you a shop, a house, or a warehouse, and you will get a true piece of nineteenth-century architecture.

It would be too long and beside the purpose to enter on the discussion of why there is no real architecture now,—in fact, no art organised to an end anywhere in the civilised world. The painters, architects, and sculptors seem as clever, as well-informed, as industrious, and as energetic as the doctors, the engineers, or the men of science. The several artists are almost as accomplished in their several arts as the Mediævals, the Greeks, or the Cinque-centists; but all their skill seems to end in imitation or in isolated effort. Victor Hugo said it was the invention of printing that killed architecture; and not simple architecture alone, but where it was enriched with all the arts the sculptor, the painter, the workers in glass, metal, and mosaic had to bestow; but, it seems to me, that it is due to the turning of men's minds to physical science rather than to beauty. There was a regular rhythmic ebb and flow of all the arts through Egypt, Greece, Rome, and Byzantium, interrupted by the Arabic and Gothic, renewed by the Renaissance in Italy, and passing thereon through the Western world, dying out again in this century. The pirate and robber hordes of the North and East, converted to different religions, threw their burning energies into raising fit temples for the faiths they had embraced, and in a few short centuries raised from the same or cognate models two different arts only comparable to each other by their daring, their invention, their originality, and their sublimity, one of which at least utterly withered

* A sort of curious zigzag on an old Persian carpet was pointed out to me the other day as an evidence of Tartar predominance, as the Tartars always introduced this cloud form into their work.

away and died as the old arts revived, and now we have nothing left but engineering or the application of science to building without beauty.

What you are compassing by the so-called restoration of ancient buildings is the destruction of the records which are committed to your safe-keeping, and, in my opinion, your are destroying them with the same right that you have to destroy one of Shakspeare's plays, or a book of the Bible. You, too, are driving the best architects and carvers of the day into "the vile herd of imitators." And you are getting something that you only pretend to like, for no one can really like anything that is opposed to every instinct he has. Good construction, good proportion, and simplicity can be had if you only want them; and if you could get to love anything beautiful, you might have that as an ornament. Even if your love was not very high, you might have the honesty to show it. There would be more hope in seeing a house ornamented with pots of beer than with crockets, cusps, and gurgoyles.

The imitated art of any other period can never be the real art of this. It can never touch those chords in *you* which it touched in those for whom it was created. The artist, be he poet, painter, architect, or sculptor, must have the hand to shape or the voice to utter those feelings that exist within your breasts. If you passionately love the beautiful things in nature that you see, I believe you will have the artists who will create things for you that are beautiful. It must not only be a nineteenth-century man, but a man of this very generation appealing to men of this generation. We cannot possibly believe that if the Greeks had not loved beauty, and been accurate judges of the human form, Greek artists could have carved those masterpieces of the chisel; and if there is no love for beauty in the people, there will be no artists.

Wealth alone will not purchase art, though you cannot have it without; there must be that love and honour for its producers that is instinctively given to the Faradays, the Huxleys, the Tyndalls, and the Spencers; but a pretended or faint liking will not produce it. This year there was at the Royal Academy a piece of sculpture that in former days and amongst other nations might have procured its author a triumphal procession, but it merely produced a few notices in the newspapers.

You have got in your ancient buildings real art which the age that erected them loved; it would be reasonable, though it might be wrong, to let them be destroyed if you despised them; but as you do pretend to love them, keep them free from the hand of the worst Vandal the world has yet seen—the restorer.

NOTES ON TIMBER.

It is exceedingly probable that timber was the principal, if it was not the sole, material used in early periods for the construction of dwelling-places. David, we are told, built himself a house of cedar, and it was the ambition of many of the early kings to embellish their palaces with rare and costly woods. Solomon covered his temple with beams and boards of cedar. "All was cedar, there was no stone seen,"—and the ships of the mighty Egyptian conqueror Sesostris were constructed of this celebrated wood. It was in those times that buildings were erected to last, and to defy time, for the exceeding bitterness of the wood is such that no insect whatever will touch it. In the temple of Apollo, at Utica, a beam was found undecayed after the lapse of 2,000 years. The cedar of Lebanon is now, however, a plant of comparative rarity, and the interminable tracts of pines in the forests of Europe and North America alone furnish the building timber of modern use. Of the pines there exist above twenty distinct species, and they are mostly, but not all, evergreens. The various species of fir come under the head of pines.

The largest trees are found in California (North America), and many writers have furnished descriptions of their enormous size. Although those of Europe are not so large, the lofty and perfectly straight trees of Norway spruce have long been celebrated, and they present a very striking appearance seen as the coast of that rugged country is approached.

> "Pines on the coast, through mists their tops uprear,
> That like to leaning masts of stranded ships appear."

It was from the pines of the Scandinavian mountains that the Norwegians and the Danes built their first ships, and the loftiest trees have since that time furnished masts for many an admiral. Much argument has been used as to whether the pine is indigenous to England, but it is conclusively shown that the ancient forests of Brittany were largely composed of it, as specimens of its roots have been unearthed from under the old Roman roads, doubtless preserved by the turpentine they contained.

The centre of a growing tree is occupied by the pithwood, which, as the tree matures, gradually closes, and becomes perfect wood, for then its duty ceases; next to the pith is situated the heartwood, and it is this alone which is of service to the builder; a belt of more recent growth surrounds the heartwood, which is called the alburnum or sapwood: this, in time, matures, and becomes heartwood; again, there is another belt, termed the inner bark; and, lastly, the tree is surrounded by the outer bark, from the appearance of which the quality or nature of the inner wood may be readily judged. In the case of a tree grown too quickly, it will present a coarse, rugged, appearance, corresponding with the fibres of the wood.

There exists communication between the pith and the bark, called the medullary rays; these radiate from the centre of the pith to the covering or bark, and their hardness and compactness afford sufficient resistance to keep open a passage for the sap to the interior of the tree. Pine trees add their wood externally,—the inner bark is the younger and the pithwood the older portion. Then leaves act as the feeders of a tree, and its increase in size is much dependent on them,—for the sap finding its way through the leaves, and becoming affected by the influence of light and atmosphere, contributes in the change greatly to its nourishment, and almost a third part of the carbon, of which the wood is largely composed, is inhaled by its leaves from the atmosphere. The age of a tree is sometimes reckoned by counting the number of its rings, termed, in consequence, annular rings, but this system of arriving at its age is not altogether reliable, as, in a varying season, its growth may be so augmented that it will add in one year several rings,—but the wood thus quickly grown is of inferior quality. In some species, such as Memel fir and pitch-pine, the annular rings are distinctly marked. The period at which the alburnum or sapwood matures into heartwood cannot be accurately arrived at, and, indeed, no perceptible change can be discovered at all, for while one layer is seen perfected, the next one to it is sapwood. Buffon and Du Hamel, two French philosophers, have furnished much information respecting the physiology of trees, and, by the aid of their experiments, was discovered the sympathy which exists between the branches and the roots growing from the same side: they found that when the branches displayed symptoms of decay the corresponding roots were invariably diseased. Fir thrives best in a climate of low temperature, and a long cold winter followed by a short hot summer, is most favourable to the production of the best fir-wood. The Scotch fir is, in most respects, similar to the redwood imported from the north of Europe, but the quality of the wood is inferior,—this probably arises from the difference in climate; the soil in Scotland being too rich for it may have something to do with its inferiority. So much does a cold situation influence the growth of the fir, that trees grown on the northern side of a hill are superior to those grown on the southern side, and those with a northern aspect better than those with a southern one. It is not an unusual thing to see the northern half of a common pine well grown, red, and hard, and the southern half, although considerably thicker from the pith to the bark, white and spongy. The heart of a tree is never in its centre, but always nearer to the northern side, and that because the wood being better grown on that side the annular rings are finer. The best part of a fir is that which is nearest to its roots, and, when a use can be discovered to which their size and shape are favourable, the roots themselves may be of service. Nature is an excellent husbandman, and trees planted by it thrive the best. Pines like a light soil, but it is not the surface so much as the under soil which is of primary importance. It is remarkable when two qualities of soil are present to what extent the roots will push themselves into the one most congenial to their nature. Pines thrive but indifferently on strong clayey land; on rich loams they mature rapidly, but the wood is inferior, and the trees contain an undue proportion of sapwood,—a light soil is preferable. There are two diseases to which converted timber is liable, and they are termed the common rot and the dry rot: the former is a malady produced by the variations of the climate acting on its surface and destroying its fibres by external action; dry rot in timber is caused by its being placed in a situation which is warm, moist, and close, the effect being to destroy its fibres by an internal action,—the want of proper circulation and the presence of damp are causes which effect the juices to putrefy, by which means the fibres of the wood are reduced to dust, and hence the term of dry-rot. Like the human frame, a tree when growing is subject to accident; if one of its branches be broken off, the injured and exposed limb becomes decayed, or if sodden with the rains before the wound is covered by the new growth of wood, rottenness will infect the roots which correspond to the injured branch, and presently it will decline, and in a few years become a tree

> "Dry and dead,
> Still clad with reliques of its trophies old,
> Lifting to Heaven its aged, hoary head,
> Whose foot on earth hath got but feeble hold."

Logs exposed to the action of sea-water are much injured by the ravages of an animal called the *Limnoria terebrans*, and so numerously will these small but destructive animals congregate on one log, that piles have been reduced from 10 inches to 7 inches square within the space of four years. The protection used is a sheathing of copper, or by submitting the logs to the process of creosoting. Wood is strong in ratio to its weight, and, as the heaviest and densest will prove the most durable, this should be selected for weight-carrying purposes, such as the ties of bridges, where the two qualities of strength and durability are desirable. Strong-baited wood weighs the heaviest, and, as it contains more resin than that of a finer grain, is especially adapted for a position which has to contend with any degree of dampness.

Timber changes but little in the process of seasoning in the direction of its length, but it shrinks considerably in the direction of its thickness. Much economy may be practised, and great waste prevented, by builders having sheds of sufficient extent; the ventilation should be whole, and without partial draught, which might affect the ends or any portion of the drying wood, more than another; and, as timber rots so much more rapidly by the ends than by the sides, the roof should hang well over to protect them. The advantages of shedding wood are very evident, for, left exposed at one time to the scorching heat of a noonday sun, at another time to the effect of drenching rains, and in the winter split, shaken, and riven, by the freezing of the water which has insinuated itself into the pores, it is but short work to destroy it. Although the question of price forms no part of the object of this article, it may be pointed out that much economy might be practised by the more general introduction of whitewood for internal joinery work. The whitewood shipped in such abundant quantities from Riga and St. Petersburg is superior to those common qualities of redwood fir and yellow pine so frequently introduced; it is easily worked, it readily unites with glue, and is capable of bearing a high state of finish. The enormous waste which was caused in the forests of Sweden and Norway by the indiscriminate cutting down of young trees, has been to a great extent stopped by the enactment of laws forbidding those being felled which are under a given size. A history of the lives of those men who, penetrating the forests of Sweden, remain at their vocation through the long and dreary winter, hewing the trees in readiness for the spring, which is to render the rivers navigable for their rafts, would be most interesting,—nor should we expect to hear that the hard-toiling peasants possess the drunken and undisciplined habits which characterise the North American lumberman.

The old system of conveying the trees from the forests of Sweden and Norway to the saw-mills was, after they had been sledged or trucked to the nearest river, to affix the owner's mark upon the logs, and then to consign them to the swift-running stream, men being stationed at the bends of the river to liberate any which might fasten themselves in the banks. In their course they were shot over the various cataracts. At the falls of Trollhætta, in Sweden,

> "Where with loud voice the power of water shakes
> The leafy wood,"

the force with which the logs were hurled over the rapids was so great that they were frequently so split and rent as to entirely spoil them; they

are now, however, sent by the canal, which passes by the falls, rafted or in lighters to their destination. When the system of casting the logs loose upon the stream was in vogue, in certain places they were stopped and examined, each owner taking those marked as belonging to him, and allowing his neighbour's to pursue its way, robbery being punished by very stringent laws.

An extensive business is carried on in North America by the tapping of pine-trees for turpentine, and those who engage their capital in this occupation are called "turpentine farmers." The incisions are made in the trees about the middle of March, and the flow of turpentine continues until about the end of October; the trees are afterwards felled and converted into logs, and shipped to this and to other countries, but the process of tapping very considerably weakens the wood. The young shoots of the common fir are edible, and, stripped of their leaves when they first appear, and properly prepared, furnish an excellent salad.

The inhabitants of Lapland convert the inner bark of the tree into a kind of bread: it is first thoroughly dried, afterwards ground into a fine dust, and then, having been kneaded into thin cakes, is baked in the usual manner; these cakes, however, at their best, are but very insipid. Nature has conferred upon mankind few gifts more precious, or more appreciable, than that of timber. An unwooded country is bleak, uninteresting, and most desolate.

The ancient Britons, the Gauls, and the Germans, in that state of society which Julius Cæsar describes to us in his histories, lived in the recesses of their forests, and the trees supplied the main wants of these rude people.

The landowner who neglects to plant the oak, or the elm, as a legacy for his children's children, should bear in mind the exhortation of the dying Scotch laird to his son, "Be aye sticking in a tree, Jock, it will be growing whilst you are sleeping."

HENRY SALES.

ARE ART COMPETITIONS FAVOURABLE TO ART PROGRESS?

IN the Art Department of the Aberdeen Congress, Mr. J. Forbes Robertson, of the *Art Journal*, who was introduced by the chairman as a distinguished native of Aberdeen, opened the question,—Are Art Competitions favourable or unfavourable to Art Progress? He began by remarking that competition in its grosser, more imminent, and strongly-pronounced phases, when it assumes the form of life-rivalry and pretension, and becomes a perpetually-sustained contest for leave to live, is a law of the universe, and pervades the whole of cosmical life. He then proceeded to say that examinations, whether written or *viva voce*, before Civil Service authorities, bring out no doubt the best book-learned men; but in the case of a diplomatist, a general, a ruler, or a magistrate of any kind, it is not so much profound erudition that is wanted as an instinctive knowledge of men, and how to manage them. No familiarity with languages, either ancient or modern, no mastery of higher mathematics, will avail that man who, when called on, is not quick to see the supreme moment of a crisis, and whose soul cannot rise to its height. One may carry everything before him in a Civil Service competition, and yet when called upon for the prompt and practical application of all he knows,—when brought face to face with the Titans of circumstances, and compelled to show his mettle in an hour pregnant with the destinies of men and mayhap of nations, some defect in his nature may make itself painfully manifest, and blast in a moment the reputation of a life. In a fine-art competition, on the other hand, there was no necessity for the judges to argue from the intellectual to the moral, or, at all events, to decide as if they did so. There were no unknown quantities to be guessed at, no complexity of conditions to be cleared up. The painter, the sculptor, the architect, the musician, or the poet is comparatively out of the world; his field of operations is confined to the sacred area of his own study, and when he enters on the peaceful strife of competition, there can be no mistake as to his merits, if his judges have any right to their office. The facility of comparing and pronouncing on works of art ought to be conditioned by the capacity and character of the judges. Excellence in any branch of art presupposes a life's devotion; and one to be a judge of such excellence must not only have been born with the art-instinct, but his natural perceptions must have been quickened by travel, and his knowledge extended by much study. It would be at once perceived, therefore, that if a public competition in a great commercial city like Aberdeen, for a building, a statue, or a mural painting, take place, there cannot be very many men in the city capable of pronouncing on the respective merits of the various works. The ten righteous men—that is, the ten cultured men—who have probably hitherto saved that city from all sorts of blunders and mishaps—may be outvoted by a set of well-meaning busy-bodies, who, because they have been successful in trade, think they must necessarily be judges of art. These were the men who, in city corporations, cause fine-art competitions to end in *fiasco*. Within the walls of the Royal Academy of England one would expect to find immaculate judges; but, strange to say, not only are its doors shut against works of surpassing merit, but, in the grand biennial competition, the gold medal itself was not invariably given to the best picture. Individual predilections, keeping out of view altogether influences of another kind, play an important part. It was argued that in art competitions judges are too often unfairly influenced, that the effect on the unsuccessful competitors is painful to the emotional and almost disastrous to their moral nature, and that there is no compensation for a fruitless waste of imagination, of thought, labour, time, and money. Did we conclude then that art competitions are prejudicial to art progress? Far from it. We had seen the antiquity and universality of competition, and it was our duty to utilise and free from all unnecessary restrictions what is evidently a law of our nature. Having instanced several cases in the history of art in which competition had produced the best results, Mr. Robertson went on to say that he should probably be opposed in his view of the case by the old Roman adage, "De gustibus non est disputandum"; but, like many other old sayings, this contained only a partial truth, for all the variable elements of taste must bear a certain relation to those which are permanent, and which, by the general consensus of cultured men, have in all ages been recognised as the canons. Let all art contests be open and free—let the judges be the most cultured men within the city, whether they be poor or rich, and if an expert from afar, whose judgment in things æsthetic has received the imprimatur of public recognition be within reach, let not the circumstances of his being a stranger prove a bar to the acceptance of his services. Above all, let the interest of the citizens at large be enlisted—let the general community be educated up to feeling that they, too, have a stake in what concerns the adornment of their native city, and the art success of her children in the world. And while the works are on view, let the press devote a daily column to the expression of the people's opinion, and then we may rest fully assured that art competitions so conducted are beneficial to art progress.

Mr. E. M. Ward, R.A., congratulated Mr. Robertson on his eloquent, instructive, poetical, but yet strictly practical paper. It involved, however, so many considerations, that it was almost bewildering; in fact, it involved the very grave consideration, namely, the weakness of human nature; but there were certain reflections on the Royal Academy to which he must allude. He was not going to cry out "Long live Diana of the Ephesians;" but he must say a word in defence of that body. He remembered many years ago, when he was quite a youth, sending in a magnificent historical work in a competition, and it was refused. He said,—"Bribery and corruption." That happened every year at the Royal Academy. He perfectly agreed with Mr. Robertson that competition would be a fine thing if the judges could be depended on. On this subject a few practical experiences were worth a great deal of theory. Now, he remembered that when many of those immortal works by himself and other artists were executed in the Houses of Parliament, there was a tremendous row in the House, and people were very uneasy and uncomfortable at the idea that foreigners should come and see such abominable specimens of art. A committee was duly formed on which he thought there were the Lord Chancellor and others with great political names, but there was scarcely a man that knew anything at all about fresco, and some of them were not aware even that the colour required to be put on fresh, and the part finished in one day. They had to come to the artists themselves to learn something about fresco, and the whole thing ended in this,—that there was a great deal said on both sides of the matter. With regard to competition, he was not quite sure that if the work was given to men of reputation,—men who had won their spurs,—it would not come to the same issue. It was a very curious thing, at all events, that almost all the men who carried out the works in the Houses of Parliament were men whose reputation stood very high before.

THE PROVISION OF ACCOMMODATION FOR THE LABOURING CLASSES.

THIS was one of the special subjects in the Health department of the Aberdeen Congress.

Dr. Hardwicke, late medical officer to the parish of Paddington, and now coroner for Central Middlesex, introduced the subject with an interesting paper, in which he described the condition of the dwellings of the working classes in the metropolis and in the large manufacturing districts in England, and the methods which had been adopted in his experience to improve them. He said it was well known that the population was increasing to a great extent, and that no adequate provision in the way of providing additional house-accommodation was being made, this neglect resulting in an amount of demoralisation that ought not and could not be tolerated. After fifteen years' experience and observation he had come to be of opinion that the best style of houses for the accommodation of the working classes was the block buildings which had been erected on the Continent, and particularly those which had been constructed at Guise, in France, by M. Godin.* His *familistere*, as it has been named, presented all the features that combined sanitary, educational, co-operative, and social advantages. The *familistere* consisted of two large buildings, five stories in height, and inclosing a court-yard covered with a glass roof. The court possessed many advantages and secured many purposes. It was paved with asphalte, and surrounded with corridors and galleries. It served as a playground for the children, a dancing-room, &c. It was well ventilated, and curiously enough, the temperature was cooller in summer and warmer in winter than the external atmosphere. The blocks were arranged in two rooms separately, or in suites of three or five rooms, with everything complete for a family. The waterclosets and urinals were situated at the corners of the block, and these as well as the court, corridors, and galleries were swept and kept thoroughly clean by women who were specially engaged for the purpose. The blocks accommodated frem 700 to 800 persons. Bath-rooms with warm and cold water, washing and ironing rooms, smoking and cooking rooms, a restaurant, a library, and reading-room, &c., were provided in each block, and everything was conducted in the most quiet and orderly manner, and with much greater harmony and propriety than would be observed in the courts and closes in this country. An interesting and useful feature of the block was the establishment of an infant nursery, under the charge of a competent nurse, where children might be left during the day and taken away at night. There were also night schools for boys and girls, and co-operative shops have been established, the shareholders being the tenants of the blocks, and the profits going to maintain the female cleaners and nurses, as well as the doctor, who visited the block every morning. The rooms were let in suites of three or four at about 8s. per week, or in one single dormitory at 2s. per week. He contrasted this rate with the price paid for accommodation by the industrial classes in London, which was about 1d. per square yard per week, or equal to the rent paid in proportion to space for the best mansions in the metropolis. He then noticed various objections which had been stated against the block system, and argued that, on the whole, it was the best which had been devised, notwithstanding certain minor drawbacks. He said that a *familistere* could be erected in London at a cost of 10,000*l*., each separate dwelling-house of three or four rooms costing about 100*l*. Ten per cent. interest on the capital would amount to about 1,000*l*. a year, but the block would actually bring in from 1,200*l*. to 1,300*l*. of rent. He deprecated the erection of private suburban dwellings for the working classes, chiefly on the ground that proper attention was not paid to sanitary matters in these dwellings, and also because

* A description of this building by Mr. Godwin, with Illustrations, will be found in the Transactions of the Social Science Association,—the Sheffield volume.

they were too far removed from the centres of industry, and difficult of access to tradesmen. He concluded this part of his paper by advocating the erection in large towns of blocks of houses on the *familistere* principle. In regard to the providing of open spaces in towns he recommended that besides the acquirement of pleasure grounds and public parks in large cities, cemeteries should be utilised as ornamental recreation ground, with mortuaries for the reception of the dead, the latter being specially necessary, as great hardship was often occasioned by corpses being kept for several days in small rooms in which families were living. He said the clergy had always thrown the greatest obstacle in the way of opening the churchyards, which they seemed to claim as their exclusive property, and which they used for their own private purposes.

Mr. William Botly agreed with Dr. Hardwicke that the block system was the best, and suggested various alterations as to the covering of the court, and the position of the buildings. He said it was high time that Parliament adopted measures for restricting the population from increasing beyond a certain number within given areas.

Mr. Baldwin Latham, Croydon, referred to the great amount of infant mortality caused by overcrowding in towns, and recommended the erection of houses in the suburbs for the working classes, either in blocks or singly. He agreed with Dr. Hardwicke as to the desirability of converting the intra-mural churchyards into recreation-grounds.

Mr. P. Esslemont, Aberdeen, remarked that the subject under consideration derived special local interest and importance from the fact that at present the citizens of Aberdeen were considering the question of providing dwelling-houses for the working classes, and had inaugurated the other day a company for the purpose of undertaking that work. He conceived that the greatest objection to the block system was that it would be considered as violating the natural independence of character inherent in Englishmen, more perhaps in Scotchmen, and very particularly in Aberdonians. It would be considered inconsistent with the sacredness of the family relationship, with the divine institution of the family, and with the feelings and instincts of the industrial classes of this country. On the other hand, he agreed with Dr. Hardwicke that it was not desirable to have the working classes living in the suburbs in detached cottages which were usually kept in a very unsanitary condition. On the whole, he considered that the ordinary description of dwelling-houses to be found in Aberdeen and elsewhere were the best if proper attention was paid to ventilation, cleanliness, &c. He concurred with Mr. Botly that something should be done for the prevention of undue increase of the population within given spaces.

Mr. Raper, of Manchester, pointed out that although Dr. Hardwicke had confined himself almost exclusively to the subject of providing houses for the working-classes in the metropolis, the question which formed the foundation of the discussion was meant to include the dwelling-houses of the labouring classes in every part of the country. He decidedly demurred to several of the propositions put forward by Dr. Hardwicke, and especially to his sweeping condemnation of the self-contained houses in the outskirts of towns, and he would not like it to go forth that this Department sanctioned the idea of discouraging the possession of their own houses by the working-classes.

Dr. Stevenson Macadam said that the air space provided for prisoners nowadays was about double the amount possessed by honest tradesmen and their families, the one class getting far too much of a good thing and the other far too little. In regard to the block system, he was afraid that the covered courts would tend to cause stagnation of air, and would prevent thorough cleansing. He approved of the system, however, for large towns.

Mr. H. H. Collins, the secretary of the department, thought that Dr. Hardwicke had taken a rather rosy and favourable view of the *familistere* system, which he was afraid would not be found to be so admirable on critical examination. Then the doctor was totally wrong with regard to figures, for instead of building working men's houses, or any other description of dwelling-houses, in London at a rate of 6d. per foot, as he had stated, he was perfectly certain that it could not be done under 10d.; and that the block indicated by the doctor would cost 17,000*l.* or 18,000*l.*, instead of 10,000*l.* He then pointed out and criticised various defects of the block system, and concluded by trusting that it would never become part of our national characteristics to live in houses similar to those advocated by Dr. Hardwicke.

The President (Mr. Chadwick) briefly went over the various points brought out in the paper and discussion, speaking generally in favour of the block system, although he thought it was susceptible of great amendment. He especially objected to the thick, damp, absorbent walls which existed in these buildings. He thought that this dampness might, perhaps, be obviated by means of concrete walls, constructed on the old Roman principle.

PEERAGE PROPERTY.

SIR,—We read the letter of Mr. George Mitchell in your impression of August 25th, and ask permission to reply. He gives a formidable array of "facts" on the income and acreage of peers, but whence he got those facts we know not.

However, though Mr. Mitchell may be much mistaken in his data, there is yet a certain moderation in his general tone compared with many Radical writers that induces us to reply with equal temperateness. He commences his attack with "five men own one-fourth of Scotland." We never heard that before, but it is well known that Government has had a survey made of the kingdom, and the results published in a "New Domesday Book" last year, and a very copious summary of that was given in the *Times* of last spring. It is there stated that one-fourth of Scotland was owned not by five but by *twenty-four* different persons! And, which is more important, it adds that 1,371,144 acres of land are held by no less than the immense number of 130,471 different owners, or about ten acres each on the average.

With respect to England and Wales, it appears that nearly one-half of the available land is held by 2,689 persons, but also that there are nearly *one million landlords* owning less than 100 acres each. So much for Mr. Mitchell's statement that all the lands of England, Scotland, Wales, and Ireland, are owned by less than 60,000 persons! a statement more remote from the truth never was uttered. Now, out of all this mass of landowners, only some 500 can be peers by the published lists. But Mr. Mitchell seems to think nearly all the country belongs to peers, and that all the land is locked up in perpetuity, so much so as to invite a revolution! What can be more far-fetched? So long as there are a million landowners in the United Kingdom, there can be no real difficulty in buying land. There is only one obstacle (which prevails in all trade transactions), the article must be *paid* for, and it so happens that land returns the smallest rate of interest: consequently, as a rule, poor people do not like to invest in it, but they are perfectly free to do so if they like. Generally they prefer to open a little shop with 100*l.* or 200*l.*, on which they could live, rather than buy two or three acres of land on which they could not live.

A sweeping fallacy underlies the whole of Mr. Mitchell's letter. He thinks that noblemen prevent the land being used, and will not allow it to be turned to any account. How amusing! Why only a portion, and sometimes a small portion, of a nobleman's estate is laid out as park: the bulk is let in farms, and every single farm supports a farmer, a number of labourers, with wives and children, and gives work to butchers, bakers, millers, implement-makers, &c. Mr. Mitchell seems to consider that every nobleman's estate supports nothing but game and two or three upper servants! We know that twenty years ago Mechi wrote books to prove that the most was got out of land by putting it all under the plough, but all practical farmers now say that arable land scarcely pays in these times, and their only resource is to turn it into grass and grow meat rather than grain. Further, Londoners should be informed that much of the uncultivated land in this country which is supposed to be offering such mines of latent wealth, will simply not pay for the expenses of cultivation any more than it would pay a builder to erect a large house on Salisbury Plain or the Lincolnshire Fens.

Respecting a marquis with 1,000,000*l.* a year from land alone, and a duke with 1,600,000*l.* a year from land, we do not credit either statement. Who told Mr. M. that another duke invests 80,000*l.* a year of surplus income in land? We never heard a well-informed educated man hold out seriously that any nobleman in the country had more than 500,000*l.* a year, if that. Let it be remembered that in all nations, where there is a population of millions, and especially a working or commercial population, there always is, and always will be, great discrepancies of wealth. Even now, in America, the model Republic, with no peers at all, there are many thousands of abject poor, and also an "upper ten thousand" of wealth. The last term, indeed, arose in America. Mr. Stewart, dying in 1876, held two millions sterling of freehold property in that city, and as much more of personal estate. Mr. Jacob Astor, also, died lately, leaving several millions sterling in New York freeholds, and had been buying land there, block after block, for many years. A man in California has just died, leaving immense wealth. There are numerous gentlemen in America with very large landed estates, and any one of them may become a millionaire in the event of a prosperous city or a Chicago springing up on his property, which, in a growing young country, might easily happen. We ourselves know a family, now in England, who hold 100,000 acres in one block in America.

Finally, let us ask this question,—What peer in England would refuse to turn his estate to a better account than at present, short of damage to his residence, if he were able to do so?

H. & R. POWELL.

SIR,—You have lately printed, from the pen of Mr. George Mitchell, two letters as revolutionary in spirit as any Continental enthusiast would desire; and with the stake you have in our country,—the dependence that capitalists, large and small, have in its tranquillity,—you are not likely to encourage any unprovoked antagonism between class and class that might lead to the disruption of society in the broad sense of a misused term. Had a French periodical of reputation equal to the *Builder*,—circulated in all the clubs and coffee-houses, and read by the best educated of the working masses,—printed a statement like that of Mr. George Mitchell, I really believe, from an intimate acquaintance with Paris and the Parisians, that the general excitement would have culminated in rebellion; and more especially at a moment of strikes and smothered discontent like the present. If Mr. Mitchell's statement regarding the unfairness or inequality of land taxation is not exact,—and with all deference to him I cannot but think he is misinformed,—some one on behalf of noblemen like the Marquis of Salisbury and the Dukes of Marlborough and Bedford should contradict it; for, unless an important error is immediately contradicted, people are apt to think, if the journal in which it appears be respectable, that it is not an error, but the truth.

What, sir? The rates and taxes of Hatfield House amount to 35*l.* 15*s.* per annum! The Palace of Blenheim is rated at 17*l.* 7*s.* 6*d.* per annum! The mansion of Woburn at 28*l.* 8*s.*! and the London tenants of these noblemen are now earnestly discussing this anomaly! "Why, just take home this fact," said to me one who holds the lease of a strip of land in Covent-garden, "I positively pay for my premises, in land-tax alone, 10*l.* per annum more than my noble and hereditary landlord pays for Woburn!"

The principal object of this letter, however, is to deprecate the style in which your correspondent betrays *animus* against what is undoubtedly, in a European point of view, a highly cultivated class—a model class as far as manners and even muscles go; to oppose emphatically his inference that a wealthy aristocracy is of no use to this country. Though I want to see the tenure of British land modified, if not altered, in principle and details—because I think that without such modification, and even alteration, the greater number of the inhabitants will not obtain proper and fairly-priced dwellings,—I do not desire to see the good feeling which has existed for so long a time between all classes of Englishmen, and which has made England the only really secure country in the world, destroyed or impaired. When the fight comes, and that it may come soon I sincerely trust, both the owners and borrowers of land must pursue the old "give and take" policy of conciliation. I fear radical reformers of our land system have nothing to hope either from the old Liberals or from Lord Beaconsfield's Government. The earlier attempts will probably be introduced by new "Liberal" and "Radical" parties when their members are sufficiently rallied to be defined; and the earlier Bills will be lost. "Conservatives" will return to office, with a request from the press and the people to "do something"; and after a little educating on the part of some incipient father-of-his-country, an incomplete measure will keep people quiet until the ultimate success of a Reform Bill, involving the suppression of entail, and the division of large useless estates, passes a House of Commons determined to alleviate at any cost the increasing burden of the middle classes, and to efface the spreading blot of aggravated pauperism.

W. H. W.

PROPOSED TOWN HALL FOR PAISLEY.

SIR,—A model for the Town-hall has been exhibited for a few days in the Museum, Paisley, for inspection, to enable the citizens to judge of its merits as a model of a public building. This model, which is well finished, has been made by the workmen of the Messrs. Clark, of the Anchor Thread Works, from designs and plans prepared by Mr. Davidson. From a careful examination of this model, I have been unable to discover any artistic excellence in it. . . . . There is something rather strange in the present course adopted by employing a man to draw a new design and plans, and having a model prepared under his superintendence. I have been informed, on reliable authority, that Messrs. Rennison & Scott, architects, Paisley, prepared plans some time since, which were approved of, and have been accepted by the Messrs. Clark as the plans for the Town-hall. I would ask the question, Is it fair or just to ignore them, as professional men, in such a manner?

JOHN LEMON.

ARTISANS' DWELLINGS.

The Improved Industrial Dwellings Company (of which Sir Sidney Waterlow is the chairman), have erected, on about two acres of land lying between the Goswell-road and St. John-street-road, Clerkenwell, a large number of dwellings for the artisan and labouring classes. Less than three years ago the site was occupied by old buildings, consisting of shops, sheds, barns, cattle lairs, and courts of the worst description. The improvement has been effected at a cost of upwards of 75,000*l*. The estate is in the centre of a densely-crowded manufacturing district, where numberless industries are carried on, and, as illustrating the great demand for proper house accommodation in this neighbourhood, we are informed that for 190 dwellings recently opened there were no fewer than 1,269 applications. On the main front in Goswell-road the ground floor consists of a row of shops. The company, which has been at work for about fourteen years, has now twenty-three estates in various parts of London, which accommodate nearly 3,000 families, or about 15,000 persons; and in course of construction there are over 600 dwellings, which will house about 3,000 persons, making 18,000 in all. We must make an opportunity to look at the new buildings. All is not gold that glitters.

"IS ART CAUSE OR EFFECT?"

Sir,—I was very glad to find in last week's issue of the *Builder* that, with your usual enlightened and progressive spirit, you recognised the important fact that art in the past was not the *cause* of, but the *effect* of civilisation. This is a thesis that I have long maintained, which I maintained in my paper on "Mural Decoration," read at the Social Science Congress at Liverpool. But I not only maintain thus much, but more than you at present seem to be prepared to admit, viz., that not only was art not the *cause* but the effect of civilisation in the past, but that it must still be so, before art attains to a healthy state,—to safe lines of progression; for it is not in the order of nature to reverse her plan, and to substitute effect for cause, and cause for effect. It is to this prevalent misconception regarding the true place of art in the economy of nature, this placing of the cart before the horse, that I attribute our mistaken, and ineffective art-policy, and the diversion of Government subsidies into wrong channels. To what end? But to see, after all these years of mistaken endeavours and misexpenditure, our English art-manufactures entering foreign marts bearing the unmistakable stamp of French designers upon them.

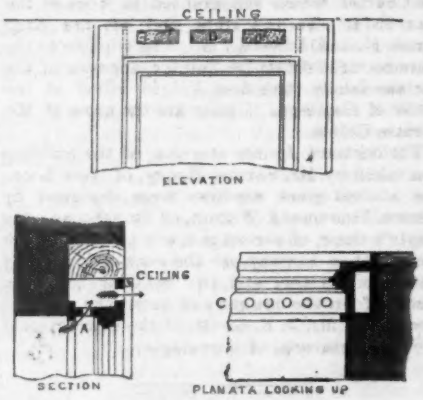
The Romans had "living" Greece before them with all her wondrous art-treasures intact, and, more than this, they had living Grecian artists working for them. The Romans had, then, more available means than we for turning effect into cause, but notwithstanding all these invaluable educational means, as we misconceive those to be, those means were unequal to making the Roman era a great art era. Again, turn to very different and comparatively modern times, to the art of the period of Louis XIV., and we find the mental characteristics of the period unmistakably stamped upon it; the art did not give form to society, but the social characteristics gave form to the art. Look also at the art development in the Netherlands, with all the art aptitude, the lavish encouragement of painting by the merchant princes, the era of Italian art lying fresh and open before the painters and the people, and yet the art of the Netherlands never passed beyond exuberance, a certain realism and wondrous technical skill: it was entirely destitute of the impress of the highest order of thought, and the highest forms of design. Yet again, there is a most noticeable example that effect cannot be converted into cause. For three hundred years or more Italy has been one vast museum of the Fine Arts. Not only her great cities, but her provincial towns have teemed with great examples: if museums could teach she ought to have been taught. For more than three hundred years, let us recollect, she has had these supposed-to-be great advantages, for a period, indeed, longer than a living Italy took to create all those art-treasures which we have been told, *ad nauseum*, are so absolutely necessary to develope art and civilisation; and with what result? The presence of all these invaluable art-treasures was powerless either to restore civilisation in Italy or to restore art. Italy will doubtless again assert herself, both in civilisation and in art, but that must come as the result of new political foundations and of education, as was the case in all time.

The fact is, the eye is blind till it is coached by the understanding. There are none so blind as the ignorant. Art falls upon the optical sense of the ignorant in vain. I heard of a circumstance which strikingly corroborates this. A friend who was for some time in India, and who had some choice engravings sent out to him, entrusted their disposition in his house to a hanging committee of natives. What was the result? To his utter astonishment, in nine cases out of ten they were hung upside down. This seems very ridiculous; but we, also, in our ignorance, hang cause and effect upside down, and think we are rendering a great service to civilisation and to art. Some day we shall know better. No, sir, depend upon it, our art era—if we are to have a great English art era—must come by the progress of education, and by the enlightened encouragement of artists by men of the highest culture: all other methods are indirect, mistaken, and ineffective, and the money lavished upon them is worse than thrown away,—it is misapplied.

W. Cave Thomas.

VENTILATION: GOLDSMITH RESIDENCES.

Sir,—I notice you give a description of these buildings, which have been erected under my superintendence, and mention that the ventilation "has not been neglected," and, as I think it will interest your readers, I send you a sketch showing the method adopted in the living-rooms.



B } Openings covered with perforated zinc.
C }

The problem was, how to obtain ventilation day and night in such a position as to be unnoticed by the tenants; for, as you are well aware, the first thing that is done by the majority of tenants of the class for which these residences are intended, is to paste paper over, or otherwise block up, all ventilators.

The sketch will show how I have tried to avoid the tenant noticing the apertures. The air comes in through the many circular openings in the top of the sash-frame C. On the inside lining of the sash-frame are panels, B, covered with perforated zinc; and as these panels are small, and close to the ceiling, there is no down-draught, and yet day and night there is pure air entering the room, the fire acting as the extractor of the bad. When there is no fire one or more of the panels will probably be an exit for foul, and the remainder inlets for fresh, air, as I have had the divisions carried through, well knowing how uncertain is the action of air, and that what at one time is an inlet, at another time becomes an exit.

As the cost is almost nominal, and there is nothing to get out of order, probably this method may become general. I have only to add I have neither registered nor patented the system, and therefore all are free to use it.

Banister Fletcher.

Death of a Welsh Sculptor.—The death is announced of Mr. Meredydd Thomas, at his residence in Buckingham Palace-road, Pimlico, London. Mr. Meredydd Thomas was a pupil of Chantrey, and enjoyed very considerable success as a sculptor. Both he and his brother, the late Mr. Evan Thomas, who was the elder, had attained some eminence. Their works adorn many of the principal towns in South Wales.

A NEWCASTLE GRAIN ELEVATOR AND WAREHOUSE.

The new grain warehouse which is being constructed upon Newcastle Quay, for a company recently formed in the town, has now made considerable progress. The company was formed with a capital of 200,000*l*., for the purpose of erecting a warehouse for grain, bread stuffs, and general merchandise, to be fitted with hydraulic machinery for the rapid discharge of vessels, and for afterwards handling and delivering grain, flour, and other merchandise, with economy and despatch. Hitherto the port has been destitute of these appliances. The situation of the new warehouse, being upon the Quay, and connected with the Quayside branch of the North-Eastern Railway, will altogether avoid the item of cartage between ship and warehouse, and warehouse and rail. The ship's cargo will be conveyed direct into the warehouse by means of an elevator, which will dredge it out of the ship's hold, and place it on endless bands running along a light iron bridge into the warehouse. Arrived there, it will be accurately weighed by machinery, a ton at a time; and then, by means of other travelling bands, it will be conveyed to the place it is to occupy. The grain will not be put into sacks at all; but worked through in bulk. This will not only effect a great saving in cost, but the airing and friction of the grain will (according to the *Newcastle Courant*, to whom we are indebted for these particulars) so far improve its condition, that it will be found possible to store it, as at Liverpool, to a much greater depth on each floor than can be done in the old description of warehouse; so that a large amount of grain can be stored on a given site. The present import of grain, flour, and bread-stuffs into the Tyne is equivalent to about 700,000 quarters per annum; and of this quantity the new warehouse will deal with about two-thirds.

The site of the building, which is now in full course of erection, is to the east of the junction of the Swirle Burn and the river Tyne; and has an area of about 4,842 square yards, with a separate site of 640½ square yards for engine and boiler house. The building will be six stories above the ground-floor, and, with the necessary deductions, will afford storage for about 120,000 quarters of grain. There will be five separate divisions in the warehouse to confine the risk in case of fire; and hydrants supplied by hydraulic power will be placed on every floor of each division. The ground-floor will be partly occupied by the railway siding and space for loading carts, and there will be an area of about 3,000 square yards for storing general merchandise. The cellars will be occupied chiefly for storing provisions, &c. On account of the great weight of such a building when filled with grain, the construction of the new warehouse involved the carrying of the foundations through the ballast and river deposit down to the substratum of clay, which has been proved to be 22 ft. thick, and lying upon solid rock.

The warehouse is being built in five sections, and the work was begun from the west end. The first thing to be done after the proving of the ground was, of course, the sinking of the foundations. Cylinders were sunk down to the clay, and filled up with cement concrete, in order to carry the main walls of the building, the depth to which the cylinders have been carried being about 40 ft. from the ground-level. The main walls will be built upon arches thrown from one cylinder to another. For the support of the columns which have to carry the floors, clusters of piles, nine in a cluster, in three rows, and with spaces of about 6 in. between them, are driven through the ballast and river-deposit about 5 ft. into the clay, and are bound to each other and to the cylinders by walings at the top. Above the ground-level the floors are to be carried upon very strong cast-iron columns. The main double beams will be 15 in. deep by 7½ in. wide, and will be joisted with 11 in. by 3 in. joists, planked over by 1¼-in. feathered and grooved planking. A special arrangement about the floors is that if a piece of timber in any part fails in any way, it can be removed without disturbing the floor generally. The building will consist of a cellar-floor, a ground-floor, six grain-floors, and a machine-floor, the latter partly in the roof, and access from the bottom of the building to the top will be by four staircases up the ends of the division-walls, between the sections. There is no idea of making any part of the building what is called "fireproof," that

mods of construction having too often proved only a snare and a delusion. What is aimed at is to localise a fire, should one unfortunately occur, confining it to one section, and letting it burn out. In each of the five sections the whole of the floors, in the event of destruction by a fire, would fall away, without doing any damage to the walls; whereas if built on the so-called fireproof system, the ironwork would give way, and in all probability bring down the brickwork with it. The staircases have fireproof doors separating them from the different floors, to enable the firemen, in case of fire, to have as long as possible access to the different parts of the building; and, on account of the danger arising from the ordinary steps fracturing from the heat, and falling to the bottom of the staircase, thus not only preventing access, but endangering the lives of the firemen, solid oak steps are used, they having been proved by experiment to resist the action of fire for a considerable time, becoming charred on the surface, but perfectly sound within, thus enabling the firemen to pass up and down stairs long after stone steps would have fallen to the ground. With the further object of preventing fire communicating from one section to another, the division walls are all to be carried about 6 ft. above the roof; and although the timbers will be placed nearly opposite to each other, there will never be less than 9 in. of solid brickwork between the timbers built into the division walls. The roof will be a plain timber one of the ordinary construction, to be sarked and slated with the best Lancashire slates. Some idea of the vast extent of the building may be formed when it is stated that no less than six millions of bricks will be used in its construction. It will, in fact, be by far the largest work hitherto constructed in the town.

The contractor for the whole of the erection is Mr. W. E. Jackson, and the work is being carried out under the superintendence of Mr. Charles Jackson, both of Newcastle, Mr. Brewis acting as clerk of works. The cylinders for the foundations have been constructed by Sir Wm. Armstrong & Co., at the Elswick Engine Works; and the columns by Messrs. Bells, Lightfoot, & Co., Walker Engine Works. The bricks are supplied by the Eltringham Coal Company and Messrs. Todd, Burlison, & Co., of Birtley, and have been selected as affording special security against moisture. The engineer for the company is Mr. John Thompson, Newcastle, who designed the building, and is superintending its construction.

THE NEW GUILDHALL AT LOOE, CORNWALL.

ON the 13th inst., while Manchester was *en fête* in celebration of the opening of the splendid municipal palace which has been erected from the designs of Mr. Waterhouse, the little borough of Looe, in Cornwall, was, in a humbler way, rejoicing in the opening of its new guildhall, —the building of which is referred to in the *Western Daily Mercury* as "the last act of reform on the part of the unreformed corporation." The building is of some interest to antiquaries, the pillory forming a conspicuous feature in the gable of the curious wooden porch.

The building is situated on the right-hand side of the principal street, near the entrance to the town, and stands on a site about 120 ft. in length and 75 ft. in width. It is in the early Gothic style, and is entirely detached, having a considerable open space around three of the sides, the fourth, or east front, facing the street, and having a wide footpath between it and the roadway. The principal feature in front is the tower, rising some 64 ft. in height, and surmounted by a slated spire. The whole height to the point of the rod above the vane is about 90 ft. The upper stage of the tower is intended to receive a clock, and four large circular openings at this level in wrought stone are formed to receive illuminated dials, each about 5 ft. in diameter. The principal entrance is through a bold doorway in the tower on the east front, with a pointed head having in the tympanum a shield boldly carved, with a representation of the arms of Looe taken from the quaint old borough seal. The walls are of local stone, dressed and squared for the front wall. The dressings of the several doors, windows, chimney cappings, copings, and other portions, are of hard Portland stone. All the roofs are covered with Delabole slate, and finished with red tile cresting. The buildings are compactly arranged, containing on the ground floor a drill-hall 45 ft. by 20 ft., armoury, harbour commissioner's office, police-cells, and entrance-lobbies. On the first floor are the large hall (the same size as the drill-hall), council chamber, and other rooms. The open arched roof of the large hall is of pitch pine, with panels of yellow deal and pitch-pine boarding, pierced for ventilation.

The windows of every room of importance are filled with stained glass, the gifts of residents in the locality. The medallion style of window has been adopted, and in the great hall there are thirteen windows. The three at the higher end are the generous gift of the mayor, Mr. Bishop. The centre one of the three represents "Ye *George* leaving Looe Harbour to join ye fleet against ye Spanish Armada." The window at the left has a portrait of De Bodrigan, founder of Looe. At the top are the arms of Looe copied from an old seal; under are the arms of Bodrigan. The window on the right has a portrait of Sir Walter Raleigh, as Lord Warden of the Stannaries. The centre window at the opposite end is perhaps the most elaborate in the whole series. It represents the landing of the *Nicholas*, at Looe, on the Revocation of the Edict of Nantes. One of the brothers is upon the quay, being welcomed by the mayor of Looe, who is introducing him to the hostess of the neighbouring hostelry. In front of the quay is a boat with the other brother stepping from the boat on to the quay, being assisted to disembark by sailors who have rowed them ashore. Quaint houses and shipping in the distance complete the picture. The window to the right of this contains a portrait of Carew, author of "Ye Survey of Cornwall." The window to the left of the centre light in the end has a representation of King Arthur of "Ye Round Table." The centre window in the side represents, in the centre, Queen Elizabeth with the Charter which she granted to Looe in the year 1574. To the right and left are King James II. and Edward III. The window to the extreme right shows De Tallifer, ancestor of the Borlase family, the first knight killed at the battle of Hastings. Under are the arms of Mr. Borlase Childs.

The contract for the erection of the building was taken by Mr. Samuel Honey, of West Looe; the stained-glass windows were designed by Messrs. Fouracre & Watson, of Stonehouse; the mayor's chair, of carved oak, and the shield over the entrance-doorway, are the work of Mr. Harry Hems, of Exeter; and the building has been erected from the designs and under the superintendence of Mr. J. F. Gould, of the firm of Gould & Sons, architects, of Barnstaple.

THE NEW THEATRE ROYAL, CORK.

THE new Theatre Royal and Opera-house, Cork, was opened on the 17th inst. It stands on a site having the river quay on one side, the large open area of Nelson-place in front, and on the other side an open inclosure and roadway, so that practically it is an isolated building. Nothing remains of the former building except the main outside walls and roof (which has received a new covering of slate). Entering at the centre vestibule there are three large double doorways affording entrance for those going to the dress-circle, private boxes, and upper circle. The vestibule, which is level with the footway, is 52 ft. long by 15 ft. wide, and 16 ft. high. Immediately opposite the external entrance are three pairs of folding doors opening into an inner corridor 11 ft. wide, the entrance to the dress circle being by a staircase on the right hand, and to the upper circle by one on the left. These two staircases meet on a wide landing at the level of the dress-circle corridor, divided by a low partition in which is a wicket-gate, so that there is every facility for transfer from the upper to the dress circle. An enclosed corridor runs at the back and sides of the dress-circle with additional staircases at the end of each to lead to the boxes in the proscenium, and by pass-doors to the corridors on either side of the pit. On the river quay side, immediately on top of the steps, is a corridor 26 ft. long by 9 ft. wide, affording standing-room under cover before the inner doors are opened. From this entrance a corridor, 7 ft. wide, facing the river quay, runs the whole side of the pit, out of which opens no fewer than four doorways. The entrance to the gallery is by an exactly-similar covered arcade on the side of the frontage next the Royal Cork Institution, from which a stone staircase, 6 ft. wide, with broad landings at frequent intervals, leads up to the gallery, which is seated for 700 persons. The dress-circle is entered from its corridor by double swing-doors and avenues, 3 ft. 6 in. wide. There are 125 seats, in four rows, fitted with arm-chairs, upholstered in maroon-colour cloth. These are the architect's registered chairs, and are manufactured specially by Wadman Brothers, of Bath. Each seat turns up to allow facility in passing. On either side of the dress-circle are three private boxes and two proscenium boxes, making in all ten boxes to hold seventy persons. Behind the dress-circle, and, having its own separate staircase, is the upper circle of five rows fitted with chairs and affording seating for about 200, while in the corridor at the back, separated by a low division, is a lounge and promenade which will hold at least 100 persons. On the level with this lounge is the rotunda saloon, a spacious hall, 52 ft. in diameter and 35 ft. high to the top of the dome. A separate staircase leads up from the corridor of the dress-circle to this saloon. This room will be available not only as a *foyer* for refreshment and promenade, but also for balls, small chamber concerts, and bazaars. The pit extends under the dress-circle, and will seat 1,000 persons.

The auditorium is surmounted, at a height of 41 ft. above the pit floor, by a domed ceiling, which, with the ornamental front to the gallery tier, the proscenium arch, and box fronts, were erected by Messrs. Jackson & Sons, of London, in carton pierre. The front of the dress-circle is of open ironwork, richly gilded. The decorations of the theatre were entrusted by the architect to Mr. Edward Bell, of London. The ceiling, pillars of proscenium, and box fronts, have a ground tone of very light cream colour. The flat part of the ceiling and the cove are painted in Romanesque ornament in gold and colours, while the raised ornamentation of the gallery and stage-box fronts is picked out in gold upon a ground colour of delicate Wedgwood blue. The stage-boxes are flanked by two fluted columns, having Corinthian capitals, richly gilded and picked out in colour. The walls are covered with a warm sage-green paper, having gold ornamentation on it, and the curtains to the private boxes, and the drapery hangings, are of crimson rep, with gold borders. These, with the carpets and upholstery generally, have been supplied by Messrs. Lyons & Co., Cork. The lighting is by a sun-burner in the centre of the ceiling, by Strode & Co. The act-drop represents the Doge's Palace at Venice, and is the work of Mr. George Gordon, of the firm of Gordon & Harford, of London. The stage opening is 30 ft. wide, the depth from the foot-lights to the back wall is 48 ft., and there is sufficient height above the stage to take up scenery out of sight. Attached to the stage are a suite of seven dressing-rooms, with property-room, scene-drop, scene painting-room, and other adjuncts to a theatre,—and all level with the stage. The stock scenery is all new, and has been painted by Mr. Barraud, of the Theatre Royal, Bristol, and Mr. Chapman, from the studio of Gordon & Harford, of London, has now taken his place as the resident artist of the theatre. The whole of the works in every department have been designed by and executed entirely under the direction of Mr. C. J. Phipps, F.S.A., architect, of London. It is stated that this is the twentieth theatre Mr. Phipps has constructed. Mr. Maximilian Clarke, from Mr. Phipps's office, has had charge of the works during their progress.

The general builders' work has been executed by Mr. Terence O'Flynn, of Cork, who only had possession of the interior of the old theatre on July 1st last.

The gasfitting has been done by Mr. William Goodman, of Cork.

THE OBELISK.

SIR,—As the site of the obelisk has not as yet been decided upon, may I suggest the Piccadilly side of the Green Park? There is a slight mound opposite Clarges-street, at present occupied by a few poplar-trees, which I think would meet all requirements, as it would throw up the monument, and not dwarf any of the surrounding buildings.

W. SMITH.

"LONDON IN 1777."

SIR,—Our house, "Gillow & Co.," was in existence at the above date on the identical spot we now occupy in Oxford-street. Our first lease has a plan with "Ye foot-path to Kilburn" marked in front of the premises.

SAMUEL J. HARRIS.

Society of Engineers.—The first ordinary meeting of this society for session 1877-8, will be held on Monday next, the 1st of October, when a paper will be read by Mr. G. W. Usill on "Rural Sanitation."

ASPHYXIATION BY ASPHALTE.

At the Thames Police Court, on the 19th inst., Mr. George Nolan, of Gracechurch-street, secretary of the Limmer Asphalte Works, carrying on business at Orchard-street, Poplar, appeared to answer a summons taken out by William Raymond (one of the officers of health to the Poplar Board of Works) "for that on the morning of the 10th ult. and on several other occasions there was a quantity of vapour arising from a large cauldron on the defendant's premises, the said cauldron being used for mixing purposes, and that the effluvium proceeding from the said vapour was of an offensive nature and injurious to health."

Mr. Raymond, Inspector of Factories for the Poplar District Board of Works, said that he served a notice on July 26th on the defendant with respect to the nuisance in question. Nothing had been done since that time to secure an abatement of it. On the 10th of last month witness visited the works; the cauldron complained of was then discharging a quantity of vapour. In November, 1875, notice was served on the company respecting the nuisance caused to the neighbourhood by the effluvium from the cauldrons, in consequence of which one of them was altered in such a way as to stop the nuisance. The other might be altered in a similar way at a trifling expense.

Mr. James Johnson, a master shipwright, of 29, Orchard-road, said that his house was within a hundred yards of defendant's premises. The smell of the vapour that came from the mixing cauldrons was very offensive and obnoxious, and had a very bad effect on the health of witness, his wife, and family.

Dr. Samuel Ellison, medical officer of health to the Poplar Board, stated that his attention had been drawn to defendant's premises. He had seen the vapour arising from the cauldron and smelt the effluvium it threw off. In witness's opinion it was a nuisance and injurious to health.

Mr. de Rutzen said he should inflict a fine of 5*l.* on the present occasion, and if the necessary alterations for abating the nuisance were not made, and any further proceedings were taken, the penalty would be doubled, and that would go on until the fine would amount to 200*l.*

SURVEYORSHIP ITEMS.

Wimbledon.—At a recent meeting of the Wimbledon Local Board, the road committee reported that they had received sixty-seven applications for the office of surveyor, vacant by the resignation of Mr. Rowell, and they had selected three of the candidates to attend,—viz., Mr. T. H. Gabbicorn, C.E., assistant surveyor and engineer, Bristol; Mr. T. Mason, general manager to the Goux Sanitary and Engineers' Company; and Mr. G. Watson, Surveyor to the Crewe Local Board. The two former only attended at the appointed hour, and having been respectively interviewed, the Board evinced a decided preference for Mr. Mason; but at the request of Messrs. Ashley and Stride, the election was postponed till the close of the sitting in order to see Mr. Watson, should that gentleman put in an appearance. Mr. Watson did not, however, appear, and upon the motion of Mr. Mellin, seconded by Mr. Elliott, Mr. Mason was elected.

St. Luke's.—The salary of Mr. Allen, the surveyor of St. Luke's, Middlesex, has been raised from 250*l.* to 350*l.* a year.

COMPETITIONS.

Sydenham Recreation-Ground.—At the meeting of the Lewisham District Board of Works on the 19th inst., it was reported that thirty-four designs had been received for erecting a lodge for the recreation-ground, the total outlay not to exceed 1,000*l.* The committee had carefully considered each design, and had selected those marked "Respice Finem," "Spes," "X.X.X," "Rusticus," and one of three designs marked "Pro Bono Publico," as the best five for selection of one by the Board. The design of "X.X.X." was not accompanied by specifications as required. The Board having disqualified "X.X.X.," proceeded to consider the remaining four designs, and finally selected that of "Respice Finem," who, it transpired, was Mr. Robert Walker, of Moorgate-street. It was also resolved that the designs should remain in the Board-room for one week for the inspection of the competitors and the general public.

Kensington Vestry-hall.—The joint committees have reported that after fully going into the matter, they found that neither of the accepted designs of Mr. Walker, Mr. Thomson, Mr. Robins, or Mr. Mew, for the new Vestry-hall offices, could be carried out for less than 20,000*l.*, and only a small difference in cost would be found in the execution of either. The committee recommend that it be referred to them to consider what steps should be taken. Major-General Boileau moved, and Mr. Liggins seconded, the adoption of the report. Mr. Fisher thought it would be unfair to the other competitors. They ought to have a fresh competition. Mr. Boutcher said all the plans, accepted and rejected, were alike as to costing at least 20,000*l.* for execution. The recommendation of the committee was then adopted.

Books Received.

Outlines of Landed Estates Management. By Robert Scott Burn. With Illustrations. London: Crosby Lockwood & Co. 1877.

This is too small a book for so large a subject. Still it contains a considerable amount of useful information, and, moreover, refers the reader to various other books containing fuller particulars. The time, it is to be hoped, has gone by when it was thought that any one, no matter what his training and previous occupation had been, could turn farmer. A farm is a great manufactory, and to be a good farmer, with a reasonable chance of success, demands a combination of qualities and an amount of acquired knowledge not found every day. If those who still have doubt on this point will look through Mr. Scott Burn's Outlines, the doubt will probably be removed. Mr. Burn has studied his subject for some years, and has it well in hand.

Miscellanea.

"Jerry" Building at Hackney-Wick.—At the meeting of the Hackney District Board of Works on the 14th inst., the clerk read a correspondence which had taken place on a letter addressed to the Board by the Local Government Board, enclosing a copy of a complaint that there were some streets of new houses of the speculative class in Hackney-wick whose character required the closest attention, being "far worse in parts than those which formed the subject of a recent action at law." The clerk replied to the Local Government Board by saying that the matter was not within the jurisdiction of the Hackney Board, but that the complaint had been forwarded to the Metropolitan Board, by whom it had been referred to the district surveyor. The district surveyor's report was to the effect that most of the houses complained of were of such a character as to require the closest attention. In the case of some of these erections, the surveyor had cautioned the builder as to the quality of the brickwork, and required that a portion be taken down, course by course, and had extracted a pledge that not less than half the bricks in the walls should be whole bricks. Mr. Holmes said he had visited the locality that morning, and could fully corroborate the complaints. The mortar used was composed of cinder-siftings, and did not contain a particle of sand; and the sewers were very inadequate, there being only a 12-in. pipe in a long street, while the road was in process of making itself of the dust and refuse which had been shot there.

The Masons' Strike in London.—In consequence of the strike, the work upon the new Law Courts at Temple Bar has now been at a standstill for several weeks. There was a clause in the contract providing that in case a strike occurred among the workmen, six months' grace should be allowed the contractors. However, Messrs. Bull determined to procure men from Germany, that the work might be proceeded with without further delay. On Saturday twenty-six German masons arrived, and twenty-four of them commenced work on Monday, and continued at work on Tuesday. It was anticipated, however, that the masons on strike would offer to pay the expenses of the Germans who had come over, and that they would be sent back. This anticipation seems to have been well-founded, for on Wednesday morning the foreman of Messrs. Bull & Sons, after waiting half an hour after the usual time for the arrival of the German masons, went to the Sussex Hotel, Bouverie-street, where they had been lodging. Upon inquiry, he found to his astonishment that after having breakfasted the Germans had left the hotel before six a.m. in two vans, one of which contained their luggage. Upon further inquiry it was ascertained that the men had gone to the Hamburg steamer, which, it was stated, had been delayed an hour beyond its time of sailing in order to take them away.——It is stated that Messrs. Killby, of Limehouse, on Monday conceded the terms asked by the men, and took on sixty masons at 10d. per hour.

Proposed Bridge Across the Bosphorus. Captain James B. Eads, an American engineer, in conjunction with Mr. A. O. Lambert, has (according to a New York paper) completed plans for a bridge across the Bosphorus, connecting Pera, European Constantinople, with the Asiatic shore. The bridge, which, with the exception of the masonry and flooring, will be constructed of iron, will be 100 ft. wide, 6,000 ft. long, and will consist of fifteen spans, of which the central one will cover 750 ft., the longest span in the world. The height of the roadway above the surface of the water will be 120 ft. The chief difficulty in the erection of the bridge will be encountered in the construction of the great central arch. The current at this point is very strong, and it will be necessary in building the piers to sink two great caissons in water more than 100 ft. deep. The piers of the arch will be 50 ft. thick, and will be constructed of granite blocks locked together with iron braces. By a new invention of the engineer, the weight of any heavy objects, such as troops or steam cars passing over the arches, will be equally distributed among all the supports, so that the danger arising from the concentration of weight upon any one point will be averted. A careful survey of the bed of the Bosphorus shows that it consists of 3 ft. of alluvial mud over about 15 ft. of sandy strata. Beneath them is a foundation of solid rock. It is estimated that the bridge can be constructed at a cost of $25,000,000, labour being uncommonly cheap in Constantinople.

Improvement in Glazing Roofs.—We are informed that the authorities of the War Office have adopted Mr. W. Edgcumbe Rendle's system of roof-glazing, in which the use of putty is dispensed with. The maintenance in repair of the roof-lights of the shops and sheds at the Royal Arsenal, Woolwich, has always been costly, tedious, and troublesome, from the difficulty of removing the hard putty. Some time ago Mr. Rendle submitted a specimen of his glazing at the Arsenal. To test the efficiency of his system, under the direction of the authorities a hose was attached to a hydrant, and a heavy deluge let down vertically upon the glass. It not only successfully resisted the attack, but proved impervious, no drip falling on the inside. The result of this trial, and the success that has attended the adoption of Mr. Rendle's system in numerous other places, has led to its adoption in the Arsenal, where the old roofs are being gradually displaced by others glazed according to Mr. Rendle's method. The railway companies are also adopting the improved method. The Caledonian new station roof at Glasgow has 120,840 square feet of glass placed—it may not be said fixed—on Mr. Rendle's system, a chief merit of which is that a broken square can be at once replaced by sliding another into the metal rests placed to receive and hold it, without either removing putty from the bed of the old pane, or applying it in any way to the new one.

Street-Cleansing Machine.—On the 12th inst. several members of the Vestry of Clerkenwell witnessed the trial of a street-sweeper, the invention of Mr. Warren, of Cheltenham. The machine was first tried in Corporation-row, on a surface of sand and shingle, worn into ruts and hardened by the traffic and rain. This was speedily worn smooth, and the sweepings conveyed to St. John-street. Here a move was made to Goswell-road, where some 200 yards in length, including tram-rails, had been thoroughly saturated with water. These, it is stated, were speedily cleansed, no surface water being visible. The machine consists of a rotary band of brushes feeding a shallop on wheels. This shallop, which will contain the same quantity as any ordinary slop-cart, can be detached instantly when full and a fresh one substituted without deranging the sweeping power. In wet weather (so it is stated) it fills itself in two minutes, and, with one attendant, completes the work of twenty men. The vestry have its adoption under consideration.

London Wall.—The *City Press* says that a piece of the old Roman wall has been removed during the past few days, whilst workmen have been pulling down a house in London-wall, near the corner of Cripplegate-buildings. Close by the site of the premises referred to lies the small but carefully-tended closed burial-ground of St. Alphage, at the back of which a part of the old Roman wall still exists, and is visible to every passer-by, though it is mostly overgrown with ivy.

The Lochburn Ironworks.—The erection of these works for Messrs. Macfarlane, Strang, & Co. (Limited), for the manufacture of cast-iron pipes, valves, and other apparatus connected with water and gas works, is now so far completed that casting operations were begun on the 13th inst. The works are built on a site of upwards of twelve acres in extent on the Possil Estate. They are bounded on the south by the Forth and Clyde Canal, on the north and north-east by Lochburnie and the Helensburgh section of the North British Railway, and on the east by the estate of Lambhill. The foundry is 300 ft. broad by 110 ft. long. In the meantime, there are two cupolas erected, each capable of melting ten tons per hour,—the blast for these being supplied by a Roots's blowing-machine, with engine combined, made by Messrs. Thwaites & Carbutt, Bradford. The works can (we learn from the *North British Daily Mail*) produce pipes from the smallest to the largest diameter manufactured or required, and when they are in full operation the firm will be in a position to make 100 tons of pipes daily, besides other work. The first castings made on the 17th inst. were the beginning of a contract for water-pipes for the Liverpool Corporation.

Civil and Mechanical Engineers' Society.—On the 22nd inst. some of the members of this society paid a visit to Lloyd's Paper Mills, Bow. Mr. C. Waite, the foreman, took considerable pains to explain the manufacture throughout, from the delivery of the English and Belgian straw, esparto grass, palm-leaves, and waste paper at wharf on the premises, to the cutting up of the vegetable matter and the separating from it of all knotty substances unfitted for paper-making, sorting the paper, filling the revolving boilers with the various materials and the necessary quantity of caustic soda, emptying the boilers, and converting the boiled straw, &c., into pulp, bleaching it with chloride of lime, and finally passing it as pulp in at one end of the machine and seeing it come out at the other,—paper. The works find employment for 180 men, women, and boys. The mechanical power is supplied by five boilers to ten steam engines, giving 300-h.p. collectively, and the quantity of paper manufactured weekly at this establishment is forty-two tons,—the proprietor having other mills at Sittingbourne.

The Transport of Colossal Monoliths by the Ancients.—At the last meeting of the Academy of Sciences, a communication from M. Robert was read relative to the means employed by the ancients to transport the large stones of the Celtic period. He says:—

"When the colossal monoliths of that age are examined, the question naturally arises, How could such enormous masses have been removed, often from a great distance, into a country which possesses no similar rock, such as, for example, Champagne? The transport of the menhirs is easily understood, as all that was necessary was to roll them over. But the great flat stones, such as those of the barrows and the dolmens, required other means of removal. In examining a monument of that nature in the sandy and pebbly fields of Nuisy, near Epernay (Marne), I found in its neighbourhood a block of roughly-rounded gritstone, about 15 in. or 16 in. in diameter. The mass, was not, however, so great that it could not be easily moved. I began to consider whether this rough globular stone had not been used for the transport of the great flat masses of the monument. If we think of the manner in which the granitic rock which supports the horse of Peter the Great at St. Petersburg was brought from Finland, the removal of the large stones of Nuisy from the plateau of Brie, whence they were evidently taken, as far as the cretaceous plains of Champagne, becomes conceivable; the balls of grit stone we find at their feet probably played the part of the cannon-balls on which the Russians pushed along the enormous Finlandic block across frozen marshes, rivers, and lakes."

The Liverpool Water Supply.—The *Liverpool Post* says that a new scheme is about to be laid before the public for the water supply of Liverpool. It is proposed to make Wales the fountain-head, by impounding the waters of the River Vyrnwy, at Llanwddyn, Montgomeryshire, and those of the River Tarratt, at Llangedwyn, embracing a watershed of quite 80,000 acres, and capable of yielding more than eight times the quantity of water now daily supplied to Liverpool. The distance the water will have to be brought is sixty-six miles. It is represented that the engineering features are very favourable. The originator of the scheme, Mr. H. Williams, C.E., of Wigan, has devoted two years to maturing his plans.

Cleopatra's Needle is now fairly on its way from Alexandria to the Thames. The obelisk ship or cylinder was christened the "Cleopatra" on the 19th inst., and at 9 a.m. on the 21st she left for England, towed by the steamer *Olga*.

Street Gases.—Mr. Edward Bellamy, Fellow of the College of Surgeons of England, writes as follows from 59, Margaret-street, Cavendish-square, W.:—

"As a surgeon to a London hospital, and therefore one able to form an opinion on the matter, may I not ask why, in all humanity, when the wholesale upturning of our main thoroughfares is contemplated, the inhabitants are not informed thereof, that their families may have, at all events, the option of leaving, and escaping infection? I have been a sufferer in the loss of an eldest child, entirely due to the exposure of the abominable mephitic atmosphere engendered by the digging up of old sewers and ancient drains, the works being open opposite my house for six weeks. I am not the only one who has suffered loss—many have done so from precisely the same cause; and illness of an enteric type has been, with more or less severity, noticeable in all the West-end streets during this presumably sanitary improvement. We pay taxes, sir, as you well know, in no proportion to our means or deserts. I do not argue for or against that, but I do hope that in future some notice may be given inhabitants of what is likely to be done, that they may escape, 'if possible, the chance of illness or death.'"

The Price of Bricks.—James Dinnage sued, in Cuckfield County Court, William Lipscombe for 9*l.* 3*s.* 7*d.*, a balance for brickmaking since last spring. Mr. Hardwicke appeared for plaintiff, whose case was that he agreed to make, burn, and clamp bricks at 10*s.* per 1,000, and 4*d.* per 1,000 was to be left over for carting. He had been discharged from defendant's employ "because he could not make bricks fast enough." Defendant stated that when Dinnage asked for employment he agreed to accept 6*s.* per 1,000 for making, 1*s.* 9*d.* burning, and 6*d.* to be left for fine money. Judgment for defendant.

A Great Lion.—A colossal lion (according to *La Semaine*) will shortly be constructed on the top of the dam (*burrage*) of Gileppe, in Belgium; it is to consist of 203 huge blocks of stone, weighing on an average 2,000 to 3,000 kilogrammes each. Its height will be about 12·50 mètres, and its length 16 m. Placed on a pedestal of granite 8 m. high, this monumental lion will be a conspicuous object throughout the valley of Gileppe. The paws of the animal will measure 1·40 m. in width, the eye 0·40 m., and the nostrils 0·80 m. each.

Sanitary Congress at Leamington.—The Congress of the Sanitary Institute at Leamington will be opened on October 3, by Dr. Richardson, F.R.S. The exhibition in connexion with the Congress will be opened on the same day by the Mayor of Leamington, when Councillor Lawson Tait, F.R.C.S., will give an account of the work of the interception sub-committee of the Birmingham corporation, illustrated by working models and plans.

Manley Park, Manchester.—The directors of the Manley Park (Manchester) Company have decided to lay out fifty-five acres of the land for building purposes. This will leave the present Hall gardens and ferneries as they are. Mr. J. T. Robinson, the successful competitor for the winter-garden and palace for the same company, has prepared plans for laying out the estate, which have been approved by the directors.

Birkbeck Institution, Chancery-lane.—The fifty-fifth session of this Institution will commence on Monday next. The inaugural address will be delivered by Dr. B. W. Richardson, F.R.S. The past session is stated to have been the most successful in the Institution's experience. Of the six "Whitworth Scholarships," open to the whole kingdom, the first and third were obtained by Birkbeck students.

Trade Unions Congress.—We postpone our report of the proceedings till our next. Mr. Brassey, M.P., has informed Mr. Broadhurst, the secretary of the Trades Congress Parliamentary Committee, that he will present to each of the delegates at Leicester a copy of his father's "Life," and a copy of his own book, "Work and Wages."

Lighting of Towns.—Mr. E. B. Ellice-Clark, C.E., the town surveyor of Hove, has just now published a report on the lighting of that town (adjoining Brighton) which is interesting beyond the locality.

Asphalte *v.* Wood.—The wood pavement in Limehouse has been condemned, and replaced with Val de Travers Rock Pavement, the same material as laid in Poultry, Cheapside, &c.

TENDERS.

For main drain and inlets, West-road, Eastdown Park, Lewisham. Mr. Wm. C. Banks, architect:—

Merritt	£302 10 0
Woodham, Bros.	215 0 0

For houses at Eastdown Park, Lewisham. Contract No. 1, comprising eighteen semi-detached houses, and Contract No. 2 comprising seventeen houses in three terraces. Mr. Wm. C. Banks, architect. Quantities not supplied:—

	No. 1.	No. 2.
Oliver	£10,800	£8,500
W. & F. Croaker	8,460	9,775
Sharpe & Everard	9,270	7,650
Marriage	6,800	8,500
Banks	7,100	7,050
Gorrum	£14,287 together.	

For farmhouse to be built at Haddenham, on the estate of the Earl of Hardwicke. Mr. George Ernat, architect:—

Thirsday	£1,470 0 0
Feast	1,450 0 0

For stabling at Park-lane, Croydon, for Mr. C. Brown. Messrs. Elkington & Son, architects:—

Jarrett	£930 0 0
Smith	914 0 0
J. & C. Bowyer	900 0 0
W. & E. Nottle (accepted)	861 0 0

For houses at Coombe Hill, Kingston, for Mr. G. F. Rogers. Messrs. Giles & Gough, architects:—

Hook & Oldrey	£4,625 0 0
Avis	4,431 0 0
Nightingale	4,363 0 0
Bayes & Allen	4,344 0 0
Sharman	4,253 0 0
Oldridge	4,147 0 0
Adamson	4,045 0 0
Jocelyne (accepted)	3,784 0 0

[Corrected List.]

For the erection of new premises, &c., at Buckingham Palace-road, Pimlico, for Mr. Frederick Gorringe. Mr. J. T. Walford, architect. Quantities supplied:—

	No. 1.	No. 2.
Higgs & Hill	£24,740	£2,460
Dove Brothers	22,960	1,590
Smith	22,350	1,500
Lawrence	22,275	1,475
Nightingale	20,976	1,470
Chappell	20,850	1,380
Scrivener & White	20,794	1,342
Browne & Robinson	20,170	1,426
Shaw (accepted)	19,623	1,253

For a pair of semi-detached houses at Blackheath, for Messrs. Bond & Butcher:—

Jerrard	£3,493 0 0
Gorrum	3,450 0 0
Bush	3,300 0 0
Staines & Son	3,086 0 0

For proposed extension of shop at 57, Loampit-vale, Lewisham, for Mr. J. Smith. Mr. W. Theobald, architect:—

D. & R. Kennard	£180 0 0
Jeal & Harryman	115 0 0
Hoare	105 0 0
Banks	88 10 0

For building a house in Romford-road, for Mr. Symmons. Mr. C. R. Peters, architect:—

Read & Son	£2,063 0 0
Moyle	1,950 0 0
F. F. & J. Wood	1,943 0 0
Tillett	1,920 0 0
Palmer	1,850 0 0
Judd & Hawkings	1,697 0 0
Hearle	1,693 0 0

For new stables (exclusive of fittings) at Church House, Oatlands Park, Surrey, for Mr. Gaskell. Mr. John Jeffkins, architect:—

Lee	£740 0 0
Farley	630 0 0
Brown	577 0 0

For the erection of factory and business premises in High-street, Shoreditch, for Messrs. Wells & Co. Messrs. Fowler & Hill, architects. Quantities by Messrs. Fowler & Hugman:—

Morter	£9,643 0 0
Oliver	9,560 0 0
Kirk & Randall	9,540 0 0
Perry & Co.	9,530 0 0
Bangs	9,453 0 0
Brass	9,430 0 0
Ashby, Brothers	9,375 0 0
Wagner	9,269 0 0
Crockett	8,651 0 0

For the erection of schools, residence, boundary-walls, &c., at Gorse-hill, near Swindon, Wilts, for the Stratton Saint Margaret School Board. Messrs. W. H. Read and W. Drew, joint architects:—

Thomas	£4,509 0 0
Barrett	4,478 0 0
Wiltshire*	4,246 0 0
Forshaw	4,245 0 0

* Accepted at 4,150*l.*

For laying pipes, &c. (Contract No. 3) in connexion with water supply for Devizes, Wilts:—

Bell	£2,837 6 6
Cutler & Sons	2,100 0 0
Laidlaw & Sons	2,059 0 0
Jowett	1,874 3 7
Green	1,857 12 3
Bailey	1,796 1 2
Bugbird	1,611 0 0
Davies (accepted)	1,195 10 0

For road-making and pipe sewers at Peckham:—

Crockett	£2,326 0 0
Pearson	2,320 0 0
Pizzey	2,200 0 0
Richson	2,000 0 0
Mayo	1,787 10 0
Harris (accepted)	1,648 0 0

For roads and sewers at Hadley:—

Killingback	£3,209	16	0
Thompson	2,700	0	0
Bloomfield	2,331	0	0
Dunmoor	2,282	0	0
Crockett	2,224	0	0
Woodham	2,13[illegible]	0	0
Pizzey (accepted)	2,100	0	0

For roads and pipe sewers at Acton:—

Baker	£715	0	0
Pizzey (accepted)	400	0	0
Jackson	399	10	0

For construction of sewer and road, to be called Netherhall-terrace, at Hampstead. Messrs. Farebrother, Ellis, Clark, & Co., surveyors:—

Anderson	£3,350	0	0
Hiscock	3,3[illegible]	0	0
Culverhouse	3,153	0	0
Nowell & Robson	3,050	0	0
Killingback (accepted)	2,880	0	0

For construction of a road in extension of Frognal, at Hampstead. Messrs. Farebrother, Ellis, Clark, & Co., surveyors:—

Anderson	£3,700	0	0
Hiscock	3,590	0	0
Culverhouse	3,180	0	0
Nowell & Robson	3,100	0	0
Killingback (accepted)	2,965	0	0

TO CORRESPONDENTS.

W. H. W.—D.—W. & E. N.—O. S.—J. R.—C. H.—M. G.—R. S.—J. H.—C. H W.—W. L.—W. H. B.—Dr. P.—S. G.—W. C. T.—L. W.—R. F.—E. A.—J. E. & Sons.—C. G.—M. & S.—R. H. S—T. E. S.—C. K.—M. H. J—G. G. (if a bill for the party-walls, properly made out, has been served on him, and payment refused, summon him to the county court).—T. K. (contract, &c., must be seen for proper answer. Take advice on the spot).—F. A. W. W. (the address of asphalte companies will be found in our advertising columns. A cement floor would be cheaper).—J. T. (next week).

We are compelled to decline pointing out books and giving addresses.

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